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MINING WORLD INDEX

of Current Literature

VOL. II SECOND HALF YEAR 1912

By GEO. E. SISLEY
Associate Editor
Mining and Engineering World

An International Bibliography of Mining and the Mining Sciences Compiled and Revised Semi-Annually from the Index of the World's Current Literature Appearing Weekly in "Mining and Engineering World"

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PREFACE.

An "Index of Current Literature," if it be correctly named, should embrace all important references to the literature of the field which it assumes to cover. In THE MINING WORLD INDEX OF CURRENT LITERATURE, the attempt has been made to cover the broad field of the world's current literature of mining, metallurgy and allied industries. This index has been compiled continuously since the beginning of 1911 and published weekly in *Mining and Engineering World.* After a year's trial, the work was so well appreciated that it was decided to thereafter publish the index semi-annually in book form for the benefit of engineers and others who wish to keep in easy touch with the progress that has been made in mining, metallurgy, etc. The first volume, published in August, 1912, covered the first six months of that year and met with instant appreciation.

In the second volume, covering the second half of 1912, some changes have been made in the arrangement adopted in the first volume, with the view to making reference easier. We believe that these changes have greatly improved the work. Sub-divisions of the larger subject heads and the inclusion of additional information covering the republication of articles in other journals, etc., will be found to be an improvement over other similar indexes. This departure in work of this kind will prove of particular benefit to those whose library facilities are limited, and this of course applies in nearly all mines and mining centers.

While we appreciate the fact that the book is not perfect, yet it gives a vast amount of information in an arrangement combining extreme simplicity, practical feasibility and immediate and permanent value.

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EXPLANATIONS AND ABBREVIATIONS

The entries show:

(1) The author of the article.

(2) A dash if the name is not apparent.

(3) The title, in italics, of the article or book. Titles in foreign languages are ordinarily followed by a translation or explanation in English.

(4) When the original title is insufficient a brief amplification is added. This addition is in brackets.

(5) The journal in which the article appeared; also the date of issue, and the page on which the article begins.

(6) Approximate number of words. Illustrated articles are indicated by an asterisk (*).

(7) The price. Articles mentioned will be supplied to subscribers of Mining and Engineering World and others at the prices quoted. Subscribers, however, will be allowed a discount of 5 cts. if the price of the article exceeds 50 cts.

Subjoined is a list of the commoner abbreviations found in this work. They are used chiefly in the names of periodicals, and of associations. The abbreviations will be found easily intelligible at sight, and are what they purport to be—self-explanatory abbreviations, not symbols.

Acad.—Academy; Académie; Accademia.
Afr.—Africa; African.
Akad.—Akademie.
Allgm.—Allgemeine.
Amer.—American.
Archts.—Architects.
Asso.—Association; Associazione.
Ber.—Berichte.
Bol.—Boletin; Boletim; Bollettino.
Bull.—Bulletin.
Bur.—Bureau.
Centralbl.—Centralblatt.
C-R.—Compte-Rendu; Resoconti.
Chem'l.—Chemical.
Chem'y.—Chemistry.
Coll'y.—Colliery.
Congr.—Congress.
d.—des (French and German).
Dept.—Department.
Deu.—Deutsche, etc.
Electr.—Electrical.
Engg.—Engineering.
Engr.—Engineer.
Engrs.—Engineers.
f.—for; für.
Gazt.—Gazette.
Geol.—Geological.
Geol'y.—Geology.
Ges.—Gesellschaft.
Gov't.—Government.
Hüttenm.—Hüttenmännische.
Ind'l.—Industrial; Industriel; Industrielle.
Ingr.—Ingenieure, Ingenieros.
Inst.—Institute; Institut; Instituto.
Instn.—Institution.
Jahresber.—Jahresbericht.
Jahrb.—Jahrbuch.
Jnl.—Journal.
Mag.—Magazine.
Mechl.—Mechanical.
Met'g'l.—Metallurgical.
Met'gy.—Metallurgy.
Mex.—Mexican.
Mittlngn.—Mitteilungen.
Mnfrrs.—Manufacturers.
Mng.—Mining.
Oestr.—Oesterreichische; Oesterreich.
Proc.—Proceedings.
Quar'ly.—Quarterly.
Rev.—Review; Revue; Revista.
Sci.—Science; Sciences.
Scient.—Scientific.
Soc.—Society; Société; Società.
Suppl.—Supplement; Supplementary.
Trans.—Transactions.
Ver.—Verein.
Verb.—Verband.
Verh.—Verhandlungen.
Zentralbl.—Zentralblatt.
Ztg.—Zeitung.
Zts.—Zeitschrift.

PART I.—ORES AND MINERAL PRODUCTS.

METALS AND METAL ORES.

CHAPTER I.

GOLD, SILVER AND PLATINUM.

GOLD.

Gold Fields and Mining.

Alderson, M. W.—*Gold Mining in Nova Scotia.*—Ind'l Advocate, July,1912; p. 5; Aug., p. 5; Sept., p. 5; 7000 w; 85c.

Bateman, G. C.—*The Porcupine Gold District, Ont.*—Mex. Mg. Jnl., Dec.,1912; p. 22; 3000 w*; 25c.

Bell, R. N.—*Big Creek Gold District, Idaho.*—E. & M. J., Nov.9, p. 891; 1000 w; 25c.

Brennan, E. H.—*Gold Mining in Nova Scotia; Oldham District.*—Canadian Mng. Jnl., July15,1912; p. 476; 2000 w; 25c.

Brockunier, S. H.—*Unit Costs, Erie Cons., Gaston, Calif.*—E. & M. J., Sept.28, p. 593; 1000 w; 25c.

Brodrick, C. T.—*Gold with Copper Ore;* [Ratio in Kyshtim pyritic ores].—Mng. Mag., June,1912; p. 431; 200 w; 35c.

Brooks, A. H.—*The Alaska Mining Industry in* 1911.—U. S. Geol. Survey, Bull. 520-A; 1912; 90 pp*; 20c.

Brown, C. C.—*Tuolumne County Mines, Calif.*—Salt Lake Mng. Rev., Oct.15, p. 18; 500 w*; 25c.

Butler, C. M.—*Recent Developments at Leadville, Colo.*—See under Lead.

Cairnes, D. D.—*Quartz Mining in the Klondyke District, Canada.* (Canadian Geol. Surv. report; abstract).—Can. Mg. Jnl., Dec.1,1912; p. 811; 6000 w; 30c.

Capps, S. R.—*Gold Placers of the Yentna District, Alaska;* [and Coal].—U. S. Geol. Survey, Bull. 520-F; 1912; 31 pp.*; 10c.

Choffat, P.—*Sur les sables aurifères, marins, d'Adica et sur d'autres dépôts aurifères;* [The beach placer sands of Adica and the west shore of Setubal peninsula, Portugal].—Portugal Service Geol. Communications, Vol. 9, 1911; pp. 1-27; $1.50.

Clapp, C. H.—*Southern Vancouver Island.*—See Copper.

Collins, E. A.—*First Impressions of the Rand.*—M. & S. P., June29,1912; p. 883; 2500 w*; 20c.

Conder, H.—*The Mt. Lyell Co.'s Property;* [Ore bodies]. — Australian Mng. Standd., Aug.1,1912; p. 107; Aug.8, p. 131; 3000 w*; 50c.

Connelly, W. A.—*Prospecting in Nicaragua;* [Northern gold fields].—M. & S. P., Sept.21,1912; p. 373; 1600 w*; 20c.

Denis, T. C.—*Annual Report, Quebec Dept. of Mines,* 1911.—See Copper.

Denis, T. C.—*Ungava.*—Canadian Mng. Jnl., July1,1912; p. 442; 2100 w*; 25c.

Dick, J. E.—*Churn-Drill Examination of Placers;* [Drill and tools, setting up and operation; sampling; calculations, etc.].—Mines & Minerals, Sept.,1912; p. 92; Oct., p. —; 7500 w*; 65c.

Eakin, H. M.—*The Rampart and Hot Springs Regions, Alaska.*—U. S. Geol. Survey, Bull. 520-I; 1912; 20 pp*; 10c.

Eddy, L. H.—*Angels Camp, Calaveras County, Calif.*—E. & M. J., Oct.12, p. 681; 1000 w; 25c.

Eddy, L. H.—*Forbestown District, Butte-Yuba Counties,* California.—E. & M. J., July27,1912; p. 167; 4500 w; 25c.

Evans, C. W.—*The Native-Operated "Gold Farms" of Peru.*—Mining & Engg. World, Aug.17,1912; p. 293; 500 w; 10c.

Feust, Arthur.—*The Chontales Mining District, Nicaragua.*—M. & S. P., Dec.7, 1912; p. 720; 2500 w*; 20c.

Frost, A. W. H.—*The Pilgrims Rest and Sabie Gold Fields;* [Oldest gold center in S. Africa].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; pp. 315-319; 6000 w*; $1.

Gama, F. P.—*El Porvenir Mine in the District of Mallama, Colombia.*—M. & S. P., July13,1912; p. 46; 2000 w*; 20c.

Gamba, F. P.—*Gold Mines in Southern Colombia.*—Amer. Inst. Mng. Engrs., Bull. 68, Aug.,1912; pp. 853-866*; $1.15.

Geiger, A. W.—*The Major Mines;* [near Baguio, Benguet, Philippines].—M. & S. P., Nov.16. p. 627; 150 w*; 20c.

Goding, W. F.—*The Mineral Wealth of Uruguay.*—Mex. Mng. Jnl., Oct.,1912; p. 35; 1200 w; 25c.

Grothe, A., and Salazars, L.—*La Industria Minera de Mexico: Tomo I—Estados de Hidalgo y de Mexico;* [The mining industry of Mexico: Vol. I—States of Hidalgo and Mexico].—Mexico City, 1912; 304 pp.; $1.50.

Haeberle, A. T.—*Commerce and Industries of Honduras.*—U. S. Consul. Rep., Nov.14, p. 817; 500 w; 20c.

Haeberle, A. T.—*Southern Honduras.*—

U. S. Consul. Rep., Aug.22,1912; p. 945; 2000 w; 20c.

Hafer, Claude.—*Historical and Mining Notes of Sonora, Mex.*—Mg. & Eng. World, Nov.16,1912; p. 908; 2500 w; 10c.

Harrington.—*South America.*—See under Copper.

Hartley, C.—*Placer Mining in Upper Valley of Grand River, Colo.*—Mining & Engg. World, Nov.9, p. 851; 1600 w; 10c.

Hatch, F. H.—*Transvaal Gold Mining; Present and Future Methods.*—Engg. Mag., July,1912; pp. 505-532*; 35c.

de Hautpick, E.—*List of Gold Companies Operating in Russia.*—Mng. Jnl., June15, 1912; p. 589; 150 w; table; 35c.

Hedley.—*Br. Columbia.*—See Copper.

Hendryx, Wilbur A.—*Slime Agitation on the Rand.*—Mg. Sci., Dec.5,1912; p. 365; 1000 w; 20c.

Heym, W.—*Goldabbau in den Witwatersrand;* [Gold mining methods on the Rand].—Kali, Erz & Kohle, Oct.15, p. 1035; Oct. 25, p. 1071; 2100 w; 65c.

Heym, W.—*Mining Industry of Japan;* [in German].—See under Coal.

Higgins, W. C.—*California-Utah Gold-Copper Mines;* [Doyle,Utah].—Salt Lake Mng. Rev., Nov.15, p. 15; 1000 w*; 25c.

Horvath, Louis.—*Ueber die alluvialen Goldwäschereien in Ungarn im letzten Jahrzehnt;* [Concerning alluvial gold washeries in Hungary in the last decade; concluded].—Montan Ztg., Nov.1,1912; p. 414; 4000 w; 35c.

Hoskins, A. J.—*Gulch Mining in Gilpin County, Colo.;* [Reworking old placers by hand].—Mines & Minerals, Nov., p. 223; 1600 w*; 35c.

Hoskin.—*Eagle Canyon, Colo.*—See Zinc.

Hubbard, J. D.—*Gold Mining in Korea.*—M. & S. P., July20,1912; p. 83; 2500 w*; 20c.

Imroth, G.—*The Future of the Rand.*—S. Afr. Mng. Jnl., Anniversary No., Sept., 1912; p. 207; 1100 w; $1.

Jacobs, E.—*Review of Brit. Columbia Mines Report,* 1911. See Platinum.

Jacobs, E.—*Rainy Hollow, B. C., and Southwestern Yukon.*—Canadian Mng. Jnl., July20,1912; p. 478; 4800 w*; 25c.

Janin, C.—*Operating Costs of California Mines.*—M. & S. P., Oct.26, p. 520; 3600 w*; 20c.

Jimenez.—*Estadistica minera en* 1909 *y* 1910, *Peru.*—See under Copper.

Johnson, R. D. O.—*Native Placer Mining in Colombia.*—E. & M. J., Oct.19, p. 741; 4000 w; 25c.

Jutson, J. T.—*Kurnalpi Gold Field, Western Australia.*—W. Aust. Mg., B. & Eng. Jnl., Sept.28,1912; p. 12; 5000 w; 1st part; 35c.

Keele, J.—*Placer Gold on Meule Creek, Seigniory of Rigaud-Vaudreuil, Quebec.*—Canada Geol. Survey, Rep. f. 1911; 1912; pp. 303-309.

Kennedy, J. C.—*The Associated Mill. Manhattan, Nevada.*—M. & S. P., July27, 1912; p. 108; 2200 w*; 20c.

King, A.—*Mining in the Territory of the Cia. de Moçambique.*—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 133; 4500 w*; $1.

Lakes, Arthur.—*Early Day Operations of Shallow Placer Deposits.*—Mg. Science, Nov. 21,1912; p. 329; 1600 w*; 15c.

Lakes, A., sr.—*Neglected Gold Dredging Opportunities of the West;* [Possibilities in Rocky Mountain states].—Mng. Sci., Aug. 22,1912; p. 116; 2700 w; 20c.

Lawn, J. G.—*Working Costs on the Rand.*—S. Afr. Mng. Jnl., Anniversary No., Sept., 1912; p. 103; 2700 w; $1.

Letcher, Owen.—*The Great Mines of Africa: Main Reef West.*—Mg. & Eng. World, Dec.7,1912; p. 1051; 1500 w*; 10c.

Letcher, O.—*The Great Mines of Africa: 3, Globe & Phoenix.*—Mining & Engg. World, Nov.2, p. 809; 2000 w; 10c.

Letcher, O.—*The Great Mines of Africa: The Simmer Deep.*—Mining & Engg. World, Oct.19, p. 711; 1600 w*; 10c.

Letcher, O.—*South Africa and the World's Gold Production.*—Mining & Engg. World, Sept.14,1912; p. 485; 2200 w*; 10c.

Letcher, O.—*Gold Mining Progress on the Witwatersrand.*—Mining & Engg. World, Sept.21,1912; p. 524; 1000 w; 10c.

Letcher, O.—*Modderfontein B. Gold Mines, Eastern Rand.*—Mining & Engg. World, Sept.28,1912; p. 579; 2700 w; 10c.

Livingston, D. C.—*Fire Assay Charges.*—M. & S. P., Oct.12, p. 468; 1800 w; 20c.

Maclaren, M.—*Discovery of Tellurides at Kalgoorlie.*—Mng. Mag., July,1912; p. 41; 1360 w; 35c.

MacLean, T. A.—*Notes on the Porcupine Gold Region, Ontario.*—Jnl. Mg. Soc., N. S., Vol. XVII, 1912; p. 82; 11 p.*; 50c.

Maddren, A. G.—*The Ruby Placer District, Alaska.*—U. S. Geol. Survey, Bull. 520-J; 1912; 14 pp.*; 10c.

Maire, L. A.—*Mining Conditions in Antioquia, Colombia.*—M. & S. P., Oct.26, p. 536; 600 w*; 20c.

Maire, L. A.—*Gold Mining in Antioquia, Colombia.*—M. & S. P., Nov.16, p. 633; 400 w; 20c.

Manning, I. A.—*Mining Development in Colombia;* [Chiefly Antioquia gold placers; also coal and oil].—U. S. Consul. Rep., July 29,1912; p. 506; 100 w; 20c.

Marmion, H. L.—*La Noche Buena Mine, Mazatlan District, Sinaloa, Mex.*—Mining & Engg. World, Aug.31,1912; p. 395; 1200 w; 10c.

Marriott, H. F.—*The Problem of Gold at Depth;* [Rand].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 67; 2000 w; $1.

Martell, P.—*Zur Geschichte der Bergwirtschaft des russischen Reiches;* [History of the mining industry in Russia; regulations; Donetz coal field; Siberian gold fields].—Bergwirtsch. Mittlngn., May,1912; pp. 75-81; 6000 w; 75c.

Martin, A. H.—*Extracting Gold from Gravel Deposits.*—Mines & Methods, Nov., 1912; p. 53; 3000 w; 20c.

Martin, A. H.—*Pump-Dredging Small Gravel Deposits for Gold.*—Mg. & Eng. World, Nov.16,1912; p. 912; 1400 w; 10c.

Martin, A. H.—*Hydraulic Elevators in Placer Mining.*—E. & M. J., Nov.16, p. 929; 1200 w; 25c.

Martin, Al. H.—*Results of Deep Mining in California;* [Methods of working deep mines of Mother Lode].—Mines & Minerals, Nov., p. 210; 2100 w*; 35c.

Martin, Al. H.—*Exploiting the Deepest American Gold Deposits;* [Deep Mines on Mother Lode, Calif.].—Mines & Methods, Oct.,1912; p. 37; 3000 w; 25c.

Martin, Al. H.—*Economic Mining of Low-Grade Gravel, California;* [Elevator system

and pump-dredge].—Mining & Engg. World, July13,1912; p. 61; 1600 w; 10c.

Martin, Al. H.—*The Way Things Look at Tonopah Today.*—Mines & Methods, Sept., 1912; p. 13; 3000 w*; 25c.

Martin, F. J.—*The La Fortuna Mine;* [Yuma county, Ariz.].—M. & S. P., July6, 1912; p. 7; 1600 w; 20c.

Maynard, G. W.—*Gold Mining in Nova Scotia.*—Ind'l Advocate, Oct., p. 5; 1200 w; 35c.

McCaskey.—*Gold in Eastern States,* 1911; *Mine Production.*—See Zinc.

MacDonald, D. F.—*Notes on the Gold Lodes of the Carrville District, Trinity County, California.*—U. S. Geol. Survey, Bull. 530-D; 1912; 37 pp*; 10c.

McNeely, R. T., and others.—*The Bolivian Placers;* [Report of American prospectors on Tipuani field; from the Sonora "Union Democrat"].—M. & S. P., June29,1912; p. 894; 900 w; 20c.

Miller, A. M.—*Mining in Swaziland;* [Gold and tin].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 130; 2000 w*; $1.

Moffit, F. H.—*Lower Copper River Basin, Alaska; Taral and Bremner Districts; Chitina District.*—U. S. Geol. Survey, Bull. 520-C; 1912; 19 pp.*; 10c.

Morse, C. W.—*Work Along the Mother Lode.*—M. & S. P., Sept.28,1912; p. 403; 600 w*; 20c.

Nash, P., and S. C. Durkee.—*Report on the Dexter White Caps Mng. Co.;* [Manhattan, Nevada].—Salt Lake Mng. Rev., June 15,1912; p. 11; 2400 w*; 25c.

Norman, S.—*Mines of the Republic District, Washington.*—M. & S. P., Aug.24, 1912; p. 235; 2400 w*; 20c.

Norman, S.—*Development of the Republic District, Washington.*—Mining & Engg. World, July6,1912; p. 12; 3200 w*; 10c.

Palmer, LeRoy A.—*Low Costs at the Wasp No. 2 Mine, So. Dakota.*—M. & M., Dec.,1912; p. 281; 2500 w*; 35c.

Payne, Henry Mace. — *Hydraulicking Frozen Gravels in Yukon.*—E. & M. J., Nov. 30,1912; p. 1038; 400 w; 25c.

Péchadre.—*Mining in France.*—See Iron.

Percival, J. B.—*Placer Mining Conditions in Dutch Guiana.*—Mining & Engg. World, Oct.5,1912; p. 623; 1600 w*; 10c.

Perez, M. O.—*Monografia de los aluviones del rio Porce y su Exploitacion;* [The gold gravels of Porce river, Colombia; and their exploitation].—Escuela de Minas Medellin; Anales; Apr.15,1912; 48 pp.

Pickings, H. B.—*Gold Mining in Nova Scotia.*—Canadian Mng. Jnl., Sept.15,1912; p. 644; 6000 w*; 35c.

Porter, E. A., and C. E. Ellsworth.—*Mining and Water Supply of 40-Mile, 70-Mile, Circle and Fairbanks Districts, Alaska, in* 1911.—U. S. Geol. Survey, Bull. 520-H; 1912; pp. 63*; 10c.

Prindle, L. M., and J. B. Mertie, Jr.—*Gold Placers Between Woodchopper and 4th of July Creeks, Upper Yukon River, Alaska.*—U. S. Geol. Survey, Bull. 520-G; 1912; 12 pp*; 10c.

Purington, C. W.—*Drag-Line Excavator for Stripping at Kolchan (Ochotsk) Placers, E. Siberia;* [Discusses Perret's paper].—Instn. of Mng. & Met'l'gy, Bull. 94; July, 1912; 7 pp.*; 65c.

Purington, C. W.—*Pioneer Co. of Siberia, Ltd.;* [Dredging resources of lower Amur region in E. Siberia].—M. & S. P., Aug.3, 1912; p. 140; 800 w*; 20c.

Rainer, —. *Moderne Bergbautechnik in den Randminen;* [Modern mining technology on the Rand].—Oestr. Zts. f. Berg- & Hwesen; July13,1912; p. 383-385; July20, p. —; 90c.

Read, T. T.—*Impressions of the Comstock.*—M. & S. P., Aug.24,1912; p. 244; 2000 w; 20c.

Rollandet, G. J.—*A Caisson System of Placer Mining Under Water;* [Williamson system].—Mng. Sci., Aug.1,1912; p. 68; 1000 w*; 20c.

Russell, M.—*Mount Emu Mining Field.*—Queensland Govt. Mng. Jnl., June,1912; p. 258; 1200 w*; 35c.

Sawyer, R. E.—*Sand-Filling on the Rand.*—S. A. Mg. Jnl., Nov.2,1912; p. 271; 1500 w; 35c.

Sawyer, A. R.—*The New Rand, Ltd., Goldfield;* [Read to N. Staffordshire Inst. of Mng. & Mechl. Engrs.; abstract].—Coll'y Guardn., Aug.30,1912; p. 427; 2000 w; 35c. Also in Iron & Coal Trades Rev., Aug.30,1912; p. 311; 3000 w; 35c.

Sellars, D. B.—*Sluicing and Dredging;* [Abstract of Victoria Mines Dept. report for 1911].—Vict. Chamber Mines, Monthly Mng. Report; April, 1912; p. 161; 500 w; 45c.

Slavík, F.—*Das Goldvorkommen von Rondny;* [Geology of the gold occurrences about Rondny, Bohemia].—Prague, 1912; 23 pp.*; 75c.

Sperry, Edwin A.—*Investigation of Feather River Black Sands;* [near Marysville, Cal.].—M. & S. P., Nov.16, p. 624; 280 w*; 20c.

Stadler, H.—*The New Metallurgy* [on the Rand]. (Jnl. Chem., Met. & Mg. Soc., S. A.; abstract).—W. A. Mg., Bldg. & Eng. Jnl., Oct.5,1912; p. 12; 5000 w; 35c.

Stinson.—*Hazelton, B. C.*—See Silver.

Storms, W. H.—*Possibilities of the Mother Lode in Depth.*—M. & S. P., Oct.12, p. 459; 4200 w*; 20c.

Storms, Wm. H.—*The High Grade Mining District, Cal.*—M. & S. P., Aug.31,1912; p. 273; 4000 w*; 20c.

Storms, Wm. H.—*Mining at Cripple Creek;* [Mining and dressing methods].—M. & S. P., July6,1912; p. 14; 600 w; 20c.

Taggart, O. R.—*Atlantic City Mining District, Wyoming.*—Mines & Minerals, July, 1912; p. 730; 1400 w*; 35c.

Thomae, W. F. A.—*Gold and Silver in Sumatra.*—Mng. Mag., June,1912; p. 433; 500 w; 45c.

Thomson, J. Allan.—*The Tellurides of Kalgoorlie.*—Jnl. Chamb. Mines (W. Aust.), Sept.,1912; p. 218; 4000 w; 75c.

Toenges, A. L.—*Mining by Timbering and Filling;* [Methods at Homestake mine, Lead, S. Dak.].—Mines & Minerals, Aug., 1912; p. 36; 2500 w*; 35c.

Umpleby, J. B.—*A Preliminary Account of the Ore Deposits of the Loon Creek District, Idaho.*—U. S. Geol. Survey, Bull. 530-G; 1912; pp. 3-11*; 10c.

Abstract in Mng. Sci., July25, p. 58; 2000 w; 20c. Also in Mining & Engineering World, Aug.10, p. 243; 2600 w*; 10c. Also in Mines & Methods, Aug., p. 558; 2100 w; 20c.

Ward, L. K.—*The Mt. Balfour Mining Field.*—Tasmania Dept. Mines, Bull. 10; 1912; 165 pp.*; $1.

Weston.—*Mogollon District.* — See N. Mexico.

Weston, W.—*Tenderfoot Gold Discoveries;* [Colorado].—E. & M. J., July20,1912; p. 124; 500 w; 25c.

Weston, E. M.—*Mining in Southern Rhodesia, with Some Details Regarding Local Conditions.*—Mng. & Engg. Rev., June, 1912; p. 361; 5000 w*; 45c.

Wishon, W. W.—*Plans of the Republic Smelting Corporation;* [southern California].—Mining & Engg. World, Nov.2, p. 801; 900 w; 10c.

Wood, J. E.—*Method of Collecting Gold from Pannings.*—Mex. Mng. Jnl., Oct.,1912; p 18; 300 w; 25c.

Worcester, S. A.—*Surface Improvements at Ajax Mine;* [Victor, Colo.; self-dumping skip hoists; electric distributing cars and cableway].—E. & M. J., Sept.28,1912; p. 601; 2600 w*; 25c.

———. *A Word for West African Gold Mining.*—Mng. World (London), Oct.12, p. 428; 1200 w; 35c.

———. *An Eastern Ontario Gold Mine;* [Ores and stamp mill near Havelock].—Canadian Mng. Jnl., Oct.15, p. 700; 2100 w*; 25c.

———. *Alaska Gold Mines Co.*—M. & S. P., Aug.31,1912; p. 262; p. 277; 2000 w; 20c.

———. *Dominian Mining Co., at Tangier, N. S.*—Canadian Mng. Jnl., Sept.15, 1912; p. 662; 500 w*; 35c.

———. *Electrical Installations of the Lena Gold Mng. Co.*—Mng. Jnl., June29, 1912; p. 667; 2500 w*; 35c.

———. *Gold and Diamonds in British Guiana;* [Deposits and working conditions; from report of Committee on Permanent Exhibitions].—M. & S. P., Aug.3,1912; p. 144; 1600 w; 20c.

———. *Gold Mining in Kyushu, Japan,* 1911.—M. & S. P., Oct.26, p. 533; 300 w; 20c.

———. *Gold in North Wales.*—Mng. Jnl., Aug.3,1912; p. 186; 500 w; 35c.

———. *Gold Mining in Ontario;* [Early history of claims].—Canadian Mng. Jnl., Nov.1, p. 748; 1200 w; 25c.

———. *Gold Mines of Alaska;* [Reviews development and present status of Alaska Treadwell, Mexican and United mines].—Mng. World (London), June14,1912; p. 767; 1500 w; 35c.

———. *Gold Prospecting in Baffin's Land;* [A. W. Scott expedition].—Mng. Jnl., July27,1912; p. 750; 500 w; 35c.

———. *Hydraulic Mining in Bauce County, Quebec.*—Canadian Mng. Jnl., Aug. 1,1912; p. 519; 800 w*; 25c.

———. *Importance of the Modder Deep Strike;* [East Rand developments on the 4 Modderfonteins].—S. Afr. Mng. Jnl., Aug.10,1912; p. 881; Aug.17, p. 917; Aug.24, p. 949; 4000 w*; 65c.

———. *Indian Gold Mining;* [(1) Mysore, Champion Reef; (2) Ooregum, Nundydroog, Balaghat, Anantapur, Hutti].—Mng. World (London), July13,1912; p. 45; July 20, p. 76; 5000 w; 50c.

———. *Increased Stringency of Transvaal New Regulations.*—Mining & Engg. World, Sept.7,1912; p. 444; 4000 w; 10c.

———. *Korea;* [Gold mining industry in].—Mng. Mag., Sept.,1912; p. 181; 1000 w*; 35c.

———. *Large profits on 5-dwt. Ore;* [Recent Transvaal developments].—S. Afr. Mng. Jnl., Aug.3,1912; p. 845; 1800 w; 35c.

———. *Milling Methods in the Manhattan District, Nev.*—Mg. & Eng. World, Dec. 7,1912; p. 1044; 1800 w*; 10c.

———. *Mines of Mitsu Bishi Goshi-Kwaisha, Japan;* [Describes the properties of the Mitsu Bishi Co., owning 21 metal and coal mines].—Mg. & Eng. World, Nov. 23,1912; p. 941; 5000 w*; 10c.

———. *Mining in Alaska;* [Recent developments].—B. C. Mng. & Engg. Record, July,1912; p. 372; 3600 w; 35c.

———. *Mining Developments in Western Australia.*—Canadian Mng. Jnl., Nov.1, p. 746; 1500 w; 25c.

———. *Mining in Frozen Ground;* [Practice in Klondike].—Mng. Mag., Sept.,1912; p. 176; 1000 w*; 35c.

———. *Mining at Fairbanks, Alaska.*—E. & M. J., Sept.21,1912; p. 537; 1200 w; 25c.

———. *Mining on the Kromdraai Line;* [North of the Rand].—S. Afr. Mng. Jnl., July20,1912; p. 776; 1000 w; 35c.

———. *Mining in Zambesia.*—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 313; 1600 w; $1.

———. *Mt. Morgan, Queensland.*—Mng. Mag., Sept.,1912; p. 174; 1000 w; 35c.

———. *Ore Reserve Grades and Recoveries;* [Analysis of mining and milling width by Rand companies].—S. Afr. Mng. Jnl., June15,1912; p. 579; 1400 w; table; 35c.

———. *"Outside" Mines of the Transvaal.*—S. Afr. Mng. Jnl., Sept. 7, 1912; p. 7; 1500 w; 35c.

———. *Progress of the Lydenburg District.*—S. Afr. Mng. Jnl., Aug.17,1912; p. 921; 500 w*; 35c.

———. *Progress in the Bembesi Mining District, Rhodesia.*—S. Afr. Mng. Jnl., June 29,1912; p. 665; July6, p. 703; 3000 w; 50c. Also in Afr. World, July27, p. 701; 1800 w; 35c.

———. *Queensland,* 1911.—Mng. Jnl., Aug.3,1912; p. 767; 2000 w; 35c.

———. *Rand Problems;* [Underground and metallurgical].—Mng. Mag., Oct., p. 248; 1500 w; 45c.

———. *Rhodesia; A Review of Mining and Metallurgy in Southern Rhodesia;* [Gold chiefly; also coal, copper, chrome iron, asbestos, diamonds, tin, silver, lead, tungsten].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 291; 13,000 w*; $1.

———. *[Some Rand Mines; Their Ore Bodies, Mining, Reduction and Treatment Practice;* Crown Mines, City Deep, Village Deep, Modder B, Robinson; Cons. Langlaagte, Modder Government, Cinderella, Meyer & Charlton, W. Rand, Roodepoort United Main Reef, Van Ryn, Robinson Deep, Knights Deep, Simmer Deep, Sub Nigel, Simmer & Jack, Geduld, Princess, Modder Deep, Main Reef, Knight Central, E. R. P. M., Randfontein Central, Brakpan].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; pp. 413-463*; $1.

———. *South Africa;* [Gold and diamond mining in 1911; review of official report].—Mng. Jnl., Oct.19, p. 1015; 3500 w; 35c.

———. *Stanthorpe District, Queensland.* —See under Tin.

———. *Striking the Reef in the Far East Rand;* [in Rand Klip and Modderfontein shafts at 1800 and 2400 ft. respectively].—S. Afr. Mng. Jnl., June15,1912; p. 572; 600 w; 35c.

———. *Systematic Hand Stoping on the Rand.*—S. Afr. Mng. Jnl., June8,1912; p. 545; 1200 w; 35c.

———. *Tarkwa Banket West, Ltd., a Promising W. African Company.*—Mng. World (London), June14,1912; p. 769; 600 w; 35c.

———. *Thawing Frozen Ground.*—Mng. Mag., Oct., p. 254; 1000 w*; 45c.

———. *The Alder Gulch Placer Diggings, Montana.*—Mining & Engg. World, Oct.26, p. 764; 500 w; 10c.

———. *The Circular Shaft at the New Modderfontein, So. Africa.*—S. A. Mg. Jnl., Nov.9,1912; p. 300 ; 1200 w; 35c.

———. *The Far East Rand, an Area of Increasing Importance.*—Mng. World (London), Aug.31,1912; p. 255; 1600 w; 35c.

———. *The Further East Rand;* [Developments about Cloverfield and elsewhere].—S. Afr. Mng. Jnl., Sept.14, p. 39; 1600 w; 35c.

———. *The Grade of Rand Ore.*—S. A. Mg. Jnl., Oct.26,1912; p. 237; 1500 w*; 35c.

———. *The High Grade Mining District.* —Los Angeles Mng. Rev., Sept.14,1912; p. 7; 1500 w; 20c.

———. *The Inmachuck Dredging Co.'s Dredge in Alaska.*—Mg. & Eng. World, Dec. 7,1912; p. 1039; 250 w*; 10c.

———. *The Lonely Reef Mine, Rhodesia.* —S. Afr. Mng. Jnl., Anniversary No., Sept., 1912; p. 313; 1500 w*; $1.

———. *The Minerals of the Murchison Range and District;* [from memoir of Transvaal Geol. Survey].—S. Afr. Mng. Jnl., June15,1912; p. 581; June22, p. 619; June 29, p. 655; July 6, p. —; 8000 w; 80c.

———. *The More Active Mining Properties of Oregon;* [Bull. No. 2, Extension Series 5, Oregon Bu. of Mines; abstract]. —Mg. & Eng. World, Dec.7,1912; p. 1052; 1200 w; 10c.

———. *The Progress of Working Costs and Profits;* [Recent Rand tendencies].—S. Afr. Mng. Jnl., July20,1912; p. 772; 1000 w; 35c.

———. *The Ophir Cyanidation Plant;* [Nevada].—M. & S. P., Nov.30,1912; p. 703; 700 w; 20c.

———. *The Rand's Ore Reserves.*—S. Afr. Mng. Jnl., Anniversary No., Sept., 1912; p. 215; 2000 w; $1.

———. *The Waihi Co. in* 1911.—M. & S. P., Aug.10,1912; p. 174; 600 w*; 20c. Also in E. & M. J., Aug.17, p. 305; 1200 w; 25c.

———. *Tigre Mining Co. Costs;* [Sonora].—E. & M. J., Aug.31,1912; p. 401; 500 w; 25c.

———. *Transvaal Gold Mining Dividends;* [25 years' record].—S. Afr. Mng. Jnl., July27,1912; p. 811; 2000 w; tables; 35c.

———. *Ueber die alluvialen Goldwäskerein in Ungarn im letzten Jahrzehnt;* [The alluvial gold washings in Hungary and Transylvania in the last decade].—Montan. Ztg., Oct.15, p. 392; Nov.1, p. —; 7000 w; 50c.

———. *West Australian Gold Mining;* [Developments, output, dividends, etc., 2d quarter, 1911].—Mng. World (London), Aug.17,1912; p. 199; 2000 w; 35c.

———. *Witwatersrand Gold Production;* [Tons milled, output and value annually since 1887].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 234; tables; $1.

———. *Witwatersrand Mines;* [Statistics of active stamps, tube mills, capital, profits, dividends, estimated life, approximate yield].—Mng. World (London), Aug. 3,1912; p. 141; 2000 w; tables; 35c.

———. *Working Costs at* 8000 *ft.;* [Probable conditions on the Rand].—S. Afr. Mng. Jnl., Oct.19, p. 207; 1400 w; 35c.

Milling, Metallurgy, Assaying, Etc.

Anderson, W.—*Mine Tributing in Rhodesia;* [Mining and metallurgic practice in leased gold mines].—Cheml. Met. & Mng. Soc. of S. Afr., Jnl.; June,1912; p. 513; 4000 w; 90c.
Reprint in S. Afr. Engg., Aug.,1912; p. 22; 35c.

Argall, P. H.—*Milling Sulpho-Tellurides at Cripple Creek;* [Mining, milling and cyaniding the dumps].—Mex. Mng. Jnl., Nov., p. 27; 2400 w*; 25c.

Bain, W. L.—*Roasting and Cyanidation;* [Motter automatic roasting furnace and process].—Mex. Mng. Jnl., Nov., p. 30; 1200 w*; 25c.

Banks, Chas. A.—*A Tailing Plant;* [Waihi-Paeroa 500-ton per day plant for cyaniding sands of Ohinemuri river outwashed from Waihi and Karangahake gold districts. N. Z.]—Mng. Mag., Aug.,1912; p. 121; 1500 w*; 45c.

Bellanger, M.—*Mines de La Bellière à St. Pierre Montlimart en Juillet* 1911; [Metallurgy at La Bellière gold mine, France, July, 1912].—Annales d. Mines France, Aug.,1912; p. 163; 1200 w; 65c.

von Bernewitz, M. W.—*Metallurgy at Bendigo.*—M. & S. P., Aug.17,1912; p. 201; 2500 w*; 20c.

von Bernewitz, M. W.—*Two New Treatment Plants in Western Australia;* [Mountain Queen and Yuanmi mills].—M. & S. P., Aug.3,1912; p. 148; 1000 w*; 20c.

Bernewitz, M. W. von.—*Power at the Waihi Mills, N. Z.;* [Waihi and Waikino; gas-engines and steam].—M. & S. P., Nov. 9, p. 591; 700 w*; 20c.

Bernewitz, M. W. von.—*Huntington Mill Practice at Kalgoorlie.*—M. & S. P., Nov. 16, p. 618; 3200 w*; 20c.

Bernewitz, M. W. von.—*Rock Crushing at* Kalgoorlie.—M. & S. P., Oct.12, p. 469; 1400 w*; 20c.

Boulger, H. D.—*The Milling and Treatment of Sulpho-Telluride Ores, Kalgoorlie, W. A.*—Br. Columbia Mng. & Engg. Record, June,1912; p. 346; 1000 w; 35c.

Brockunier, S. M.—*Costs at the Erie Mine;* [Eureka district, Calif.; stamp mill efficiency, shrinkage, stoping, etc.; total costs, $1.29 per ton mined and milled].—E. & M. J., Sept.7,1912; p. 455; 2500 w; 25c.

Carter, T. L.—*Gold Placers of Arizona; Dry Washings.*—M. & S. P., Aug.10,1912; p. 166; 3600 w*; 20c.

Clark, Allan J., and Sharwood, W. J.—*Metallurgy of the Ores of the Homestake Mine, So. Dakota;* [Bulletin 98, Inst. Mg. & Met.; abstract].—Mg. & Eng. World, Dec.7,1912; p. 1035; 5000 w; Dec.14,1912; p. 1090; 3000 w*; 20c.

Cowles, R. K.—*Precipitation of Gold and Silver by Carbon.* (Proc. Aust. Inst. M. E.). —M. & S. P., Dec.7,1912; p. 730; 1800 w*; 20c.

Darrow, W. E.—*Refining Zinc Box Precipitate.*—E. & M. J., Oct.26, p. 785; 800 w; 25c.

Del Mar, A.—*The Bishop Creek Mill;* [Inyo county, Calif.].—M. & S. P., Nov.2, p. 561; 1000 w*; 20c.

Del Mar, A.—*An Unusual Type of Mill;* [Fort Bidwell crusher station, California]. —M. & S. P., June29,1912; p. 897; 1000 w; 20c.

Denny, G. A.—*Ore Valuation;* [Rand methods and liability to over-valuation].—

S. Afr. Mng. Jnl., Anniversary No., Sept., 1912; p. 45; 4000 w*; $1.

Denny, G. A.—*Discussion on Chilean Mills.*—Informes y Memorias del Instituto Mexicano de Minas y Metalurgia, Vol. 3, No. 1, 1912-1913, p. 25; 8000 w; 50c.

Dewey, F. P.—*The Sampling of Gold Bullion.*—Amer. Inst. Mng. Engrs., Bull. 70, Oct.,1912; pp. 1075-1102; $1.15.

Döring.—*Progress in Metal Analysis,* 1911; [in German].—See under Copper.

Downey, C. J.—*Multiple-Deck Concentration of Slimes;* [New Wilfley large capacity slime tables].—Mng. Sci., July25,1912; p. 62; 2800 w*; 20c.

Drucker, A. E.—*Mining Plants of the Oriental Con., Unsan, Korea.*—M. & S. P., Nov.23,1912; p. 652; 2500 w*; 20c.

Durant, H. T.—*Dry Tube Milling.*—E. & M. J., July20,1912; p. 111; 750 w*; 25c.

Edmands, H. R.—*Smelting and Refining Zinc Box Precipitate.*—M. & S. P., July13, 1912; p. 55; 1200 w; 20c.

Empson, J. B.—*Discussion on Chilean Mills.*—Informes y Memorias del Instituto Mexicano de Minas y Metalurgia, Vol. 3, No. 1, 1912-1913, p. 41; 3000 w; 50c.

French, H.—*New Volumetric Methods in Vogue at Mints.*—Mining & Engg. World, Nov.9, p. 853; 3500 w; 10c.

French, W. G.—*An Unusual Type of Mill;* [Crusher and stamps at Fort Bidwell mine, Modoc county, Cal.].—M. & S. P., June22, 1912; p. 865; 500 w*; 20c.

Friese, Fr.—*Neuere Versuche aus dem Gebiete der Aufbereitung goldhaltiger Erze, vornehmliche Pyrite;* [Researches in the metallurgy of auriferous, especially pyritic, ores; roasting; cyanide losses; effect of cyanide on foreign metals; Black-Etard permanganate process; Sulman-Teed or potassium bromocyanide process; precipitation].—Oestr. Zts. f. Berg- & H-wesen, Apr.,27, 1912, p. 227; May4, p. 241; May11, p. 260; May18, p. 270; 9000 w*; $1.50.

Gascoyne, R.—*The Three Giant Producers on the Rand in* 1911; [Milling records of Crown Mines, E. Rand and Randfontein].—M. & S. P., June15,1912; p. 823; 2000 w*; 20c.

Gieser, H. S.—*Benoni Mine and Mill on the Rand.*—E. & M. J., July6,1912; p. 23; 3600 w*; 25c.

Goosman, J. G.—*The Waihi Mill, N. Z.; Ore Reduction and Cyaniding.*—Australian Mng. Standd., Aug.8,1912; p. 132; 1000 w; 35c.

Goosman, J. B.—*Refining Cyanide Precipitate at Waihi, N. Z.;* [from Australian Mng. Standd.].—Mex. Mng. Jnl., Sept.,1912; p. 26; 600 w; 25c.

Green, M.—*A Research Upon a Refractory Gold Ore.*—Cheml. Met. & Mng. Soc. of S. Afr., Jnl.; Sept.,1912; pp. —; 95c. Abstract in S. Afr. Mng. Jnl., Sept.28, p. 111; 2000 w; 35c.

Hardinge, H. W.—*Wet Concentration of Furnace Slags.*—E. & M. J., June29,1912; p. 1262; 1100 w; 25c.

Hixon, Hiram W.—*Smelting Cyanide Precipitate.*—E. & M. J., Nov.30,1912; p. 1027; 1000 w*; 25c.

Howard, L. O.—*New Stamp Mill of the Manhattan-Big Four.*—Salt Lake Mng. Rev., Sept.30,1912; p. 16; 1800 w*; 25c.

Howard, L. O.—*"Ben Harrison" Concentrating Plant;* [Sumpter district, Oreg.; concentrating stibnite containing gold-silver values.]—Salt Lake Mng. Rev., Oct. 15, p. 16; 1200 w*; 25c.

Hutchinson, J. W.—*Lime in Cyanidation;* [Goldfield Consol. mill, Nevada; crushing in water vs. crushing in solution].—E. & M. J., July27,1912; p. 170; 1500 w; 25c.

Irvin, Donald F.—*Disposal of Tailing at El Tigre, Sonora, Mex.*—M. & S. P., Dec.7, 1912; 727; 2500 w*; 20c.

Jacquier, G.—*A New Automatic Extraction Process;* [Catalytic force of aluminum, electric earth currents and ultra-violet sun rays used to precipitate metals from aqueous solutions].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 337; 2500 w; $1.

Jacquier, G.—*Photolyse, a New Automatic Process for the Extraction of Metals;* [Precipitation on aluminum plates from warm water solutions].—S. Afr. Mng. Jnl., Sept.14, p. 45; 800 w*; 35c.

Jacquier, G.—*Approximate Losses of Gold and Zinc in the Zinc Sulphate Solution by the Principal Groups of Mines on the Rand.*—S. Afr. Mng. Jnl., Aug.24,1912; p. 962; 500 w; 35c.

Jennings, S. J.—*Metallurgical Bookkeeping.*—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 33; 700 w; $1.

Keller, Edw.—*The Solubility in Nitric Acid of Gold Contained in Certain Copper-Alloys—Copper Bullions.*—Amer. Inst. Mng. Engrs., Bull. 67; July,1912; pp. 681-695; $1.15.

Key, A. Cooper.—*Two Decades of Mining on the Rand;* [Review of mining and milling costs, extraction, profits, etc., 1890-1911.—E. & M. J., Aug.24,1912; p. 340; 1200 w; 25c.

Longbottom, W. A.—*Cyanidation of Antimonial Tailings at Hillgrove, N. S. W.*—Mng. & Engg. Rev., May,1912; p. 333; 2100 w*; 35c.

Martin, Al. H.—*Treatment of Gold Concentrates;* [Chlorination vs. cyaniding in California; Nevada; Alaska].—Mines & Methods, July,1912; p. 537; 3000 w; 20c.

Martin, A. H.—*Canvas-Table Concentration in California.*—E. & M. J., Sept.21, 1912; p. 542; 1600 w*; 25c.

Martin, A. H.—*The Pioneer Gold Stamp Mills of California;* [History of early-day stamps].—Mining & Engg. World, Aug.24, 1912; p. 332; 1500 w; 10c.

Martin, A. H.—*Evolution of Stamp Milling at Home and Abroad;* [History in California and Randfontein Central, Rand].—Mines & Methods, Aug.,1912; p. 561; 2500 w; 25c.

MacCoy, F.—*Esperanza-Federal Classifier.*—E. & M. J., Sept.28,1912; p. 591; 700 w*; 25c.

McGlew, A. C.—*Electrical Plant of the Golden Horse-Shoe Estates Co., Ltd.;* [Part 2, describing electric mill drive].—W. Australia Chamber Mines, Jnl.; May 31, 1912; pp. 92-99*; 65c.

McMurtry, G. C.—*Collection of Precious Metals as Speiss in the Smelting of Antimonial Concentrates;* [Recovery of gold from copper concentrates or matte].—Instn. of Mng. & Met'gy, Bull. 97; Oct.,1912; 8 pp; 65c.

Megraw, Herbert A.—*Cyaniding at the Dome Mill, Ont.*—E. & M. J., Nov.23,1912; p. 983; 4000 w*; 25c.

Merrill, F. J. H.—*Dry Concentration of Placer Gold.*—M. & S. P., July13,1912; p 50; 2500 w*; 20c.

Navàez, Francisco.—*Discussion on Chilean Mills* [in Spanish].—Informes y Memorias del Instituto Mexicano de Minas y

Metalurgia, Vol. 3. No. 1, 1912-1913. p. 11; 4400 w*; 50c.

Neumann.—*Metallurgy in 1911* [in German].—See Tin.

Nicholas, F. C.—*Developments at the Sierra Pinto Mines, Sonora;* [Salt water in amalgamation; coarse screening; treatment].—Mining & Engg. World, July27, 1912; p. 144; 1000 w; 10c.

Raydt.—*Gold-Silver Alloys.*—See Alloys.

Robertson, G. A.—*Hydraulic Classification of Pulps for Tube Milling.*—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 334; 2700 w; $1.

Rose, T. K.—*The Annealing of Coinage Alloys;* [Read to Inst. of Metals; abstract of paper and discussion].—Engnrg., Sept. 27,1912; p. 433; 2000 w; 35c.

Saunders, G. J.—*Metallurgical Treatment at Mt. Morgan, Queensland;* [Oxidized, mundic and copper-gold ores; roasting, smelting, acid plant, chlorination].—Sydney Univ. Engg. Soc., Jnl., Vol. 16 (for 1911-12); pp. 25-60*; $2.

Schmitt, C. O.—*The Design and Construction of Reduction Plants;* (2) *The Transport of Materials;* [Rand Metallurgical Practice, Vol. II].—Johannesburg, London, and Philadelphia; 1912; 438 pp.; 434 figs.; $6.50; (book).

Simmons, J.—*Crushing in Slow-Speed Chilean Mills in South Dakota;* [at the Minnesota mill, Maitland].—Mining & Engg. World, Nov.2, p. 813; 2000 w*; 10c.

Simmons, J.—*Victoria Mine and Mill, Black Hills, S. Dak.*—Mining & Engg. World, Sept.28,1912; 2000 w*; 10c.

Slemssen, J. A.—*Reaktion auf Goldsalze mit m-Phenylendiamin;* [Production of colloid gold from 0.5% watery chloride solution by use of 0.5% *m*-phenylendiamine sulphate solution].—Chemiker Ztg., Aug.15, 1912; p. 934; 400 w; 35c.

Snodgrass, J. H.—*Russian Gold-Leaf Industry.*—U. S. Consul. Rep., Nov.6, p. 670; 1000 w; 20c.

Stadler, H.—*The New Metallurgy and the East Rand Propr. Mines;* [Discusses fine grinding and extraction, and working costs].—Mines & Minerals, July,1912; p. 739; 3600 w; tables; 35c.

Tremoureux, R. E.—*A Successful Treatment of Concentrates by Cyanidation.*—Mex. Mg. Jnl., Dec.,1912; p. 18; 1200 w; 25c.

Trenkner.—*The Assay for Gold, Silver and Platinum;* [at the Berlin mint; translated by O. H. Hahn].—E. & M. J., June29, 1912; p. 1280; 1200 w; 25c.

Tweedy and Beals.—*Milling Costs, Minas del Tajo, Sinaloa.*—See under Silver.

Urquhart, Charles H.—*The Black Oak Mill, Calif.*—M. & S. P., Nov.30,1912; p. 687; 3000 w*; 20c.

Welch, R. K.—*Mining and Milling in the Elk City District, Idaho.*—Mining & Engg. World, Aug.31,1912; p. 391; 1500 w*; 10c.

West, H. E.—*Early Days at Kalgoorlie;* [Reviews introduction of metallurgic improvements].—Mng. Mag., Aug.,1912; p. 135; 500 w; 45c.

Westling.—*Raukin Nitric Acid Process for Sulphide Ores.*—See under Lead.

White, H. A.—*Evolution in Metallurgy;* [Old and new ideas in Rand practice].—S. Afr. Mng. Jnl., Anniversary No., Sept., 1912; p. 59; 2100 w; $1.

Wile, R. S.—*An Electric Furnace for Treatment of Tin Dross, Concentrates from Cyanide Mills and Other Metallurgical Work.*—Met. & Chem. Engg., Aug.,1912; p. 495; 1000 w*; 35c.

Wilmoth, L. J.—*Assay of Graphite Crucibles.*—Mex. Mng. Jnl., Nov., p. 23; 1200 w; 25c.

Wood. *Flotation Process.*—See Molybdenum.

Young, George J.—*Testing the Filtration Rate of a Slime.*—Mex. Mg. Jnl., Dec., 1912; p. 36; 2000 w*; 25c.

"F. M. S."—*Lluvia Oro Refining;* [Suggests improvements].—E. & M. J., July6, 1912; p. 6; 600 w; 25c.

M. S. 1.—*Affinage électrolytique d'anodes d'or brut;* [Electrolytic refining of gold bullion anode bars; Wohlwill process in warm hydrochloric acid].—Jnl. du Four Electriq., July1,1912; p. 295; 1000 w; 35c.

———. *A Mining and Metallurgical Journey;* [Describes Republic district, Washington; gold mines and N. Washington mill].—N. W. Mng. News, Aug.,1912; p. 80; 4500 w*; 35c.

———. *Australasian Institute of Mining Engineers: New South Wales Trip.* 1912; [Mt. Cobar and Mt. Boppy mines, mills and smelters; Port Kembla and Cockle Creek smelters and electrolytic refineries].—Australian Mng. Standd., June20,1912; p. 581; 4200 w; 35c.

———. *Costs of Hand-Sorting and Developing at the Ferreira Deep, Rand.*—E. & M. J., June22,1912; p. 1225; 250 w; 25c.

———. *Electric Motor Drive for Tube Mills.*—Mining & Engg. World, Sept.14, 1912; p. 420; 300 w; 10c.

———. *Extraction Results and Reduction Costs;* [Comparative data from several Rand mines].—S. Afr. Mng. Jnl., July6, 1912; p. 693; 1000 w; tables; 35c.

———. *Is the Stamp Mill Doomed?*—S. Afr. Mng. Jnl., Sept.28, p. 107; 1400 w; 35c.

———. *Langlaagte Cons. New Mill.*—S. Afr. Mng. Jnl., July13,1912; p. 733; 500 w*; 35c.

———. *Metallurgy of the Rand Banket;* [Brief description of gold recovery processes on the Rand; sizing; sorting; stamp milling; amalgamation; tube milling; cyaniding].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 177-198; 16,000 w*; $1.

———. *Mining at Treadwell, Alaska;* [Summaries of mine and mill returns of Treadwell, Mexican and United mines].—M. & S. P., June22,1912; p. 863; 2000 w; tables; 20c.

———. *Mount Morgan;* [Analysis of 1908-1912 reports]. — Australian Mng. Standd., July11,1912; p. 29; July18, p. 53; 5000 w; 50c.

———. *New Mills for the Rand and Rhodesia.*—S. Afr. Mng. Jnl., Sept.7, p. 5; 1000 w; 35c.

———. *North Star Amalgamation Tables.*—E. & M. J., June29,1912; p. 1270; 500 w*; 25c.

———. *Retreatment of Sand Residues;* [Stanley classifier to re-treat 600,000 tons at Bonanza dump, Rand].—S. Afr. Mng. Jnl., June29,1912; p. 649; 2000 w; 35c.

———. *Shaking Amalgamation Tables for Tube Mill Circuit;* [Rand practice].—E. & M. J., July13,1912; p. 63; 1100 w*; 25c.

———. *[Some Rand Mines; Their Ore Bodies, Mining, Reduction and Treatment Practice;* Crown Mines, City Deep, Village Deep, Modder B, Robinson; Cons. Langlaagte, Modder Government, Cinderella,

Meyer & Charlton, W. Rand, Roodepoort United Main Reef, Van Ryn, Robinson Deep, Knights Deep, Simmer Deep, Sub Nigel, Simmer & Jack, Geduld, Princess, Modder Deep, Main Reef, Knight Central, E. R. P. M., Randfontein Central, Brakpan].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; pp. 413-463*; $1.

———. *The Benoni Problem;* [Discusses unsatisfactory showing of first mill runs].—S. Afr. Mng. Jnl., May25,1912; p. 456; 1200 w; 35c.

———. *The Bradley Process;* [Chloride roasting and chlorination to recover copper, gold and silver from waste slimes at Washoe, Montana].—M. & S. P., June 15, 1912; p. 822; 750 w; 20c.

———. *The Caldecott Diaphragm Cone Classifier.*—E. & M. J., Aug.10,1912; p. 257; 1600 w*; 25c.

———. *The Caldecott Sand Filter Table.*—E. & M. J., July6,1912; p. 15; 1200 w*; 25c.

———. *The Cons. Langlaagte Reduction Works.*—S. Afr. Mng. Jnl., June8,1912; p. 537; 2000 w*; 35c.

———. *The Deverell Gold Saving Machine.*—Mining & Engg. World, July20, 1912; p. 124; 450 w; 10c.

———. *The Gravity Stamp on the Witwatersrand.*—Mining & Engg. Rand, Oct.12, p. 675; 1000 w; 10c.

———. *The Progress of Working Costs and Profits;* [Rand gold fields, 1908-1911].—S. Afr. Mng. Jnl., July13,1912; p. 729; 1600 w; 35c.

———. *The South Rand (Crown Mines) Sorting and Crushing Station.*—S. Afr. Mng. Jnl., July6,1912; p. 691; 300 w*; 35c.

———. *The Van Ryn Deep's Equipment* [80 stamps, 8 tube mills, 20-ton filter plant, mill layout, etc.].—S. Afr. Mng. Jnl., Sept. 21, p. 75; 2000 w*; 35c.

———. *The Witwatersrand Co-Operative Smelting Works;* [For treatment of gold-bearing by-products of Rand mines].—S. Afr. Mng. Jnl., Anniversary No., Sept., 1912; p. 332; 800 w; $1.

———. *Where the Output Comes From;* [Amalgamation and cyanide yields compared].—S. Afr. Mng. Jnl., Aug.24,1912; p. 954; 1000 w; tables; 35c.

———. *Witwatersrand Mines;* [Statistics of active stamps, tube mills, capital, profits, dividends, estimated life, approximate yield].—Mng. World (London), Aug. 3,1912; p. 141; 2000 w; tables; 35c.

———. *Working Costs and Profits on the Witwatersrand.* — Mining & Engg. World, Oct.5,1912; p. 622; 1200 w; 10c.

Geology.

Arthur, R.—*Mineral Resources of the Philippine Islands.*—Mining & Engg. World, July20,1912; p. 107; 2000 w; map; 10c.

Bancroft, J. A.—*Report on the Geology and Mineral Resources of Kockeki and Kewagama Lakes Region;* [Adverse report on gold].—Quebec Dept. Mines Report for 1911; 1912; p. 160-207*; $1.

Bateman, A. M.—*Geology of Fraser Canyon and Vicinity, B. C.; Siwash Area.*—Canada Geol. Survey, Rep. f. 1911; pp. 125-130.

Bateman, G. C.—*The Porcupine Gold District, Ontario.*—Mex. Mg. Jnl., Dec.,1912; p. 22; 3000 w*; 25c.

Blatchford, T. and J. Y. Judson.—*The Mining Geology of the Kanowna Main Reef Line, Northeast Coolgardie Goldfield;* [with petrological notes by R. A. Farquharson, and chemical notes by F. S. Simpson].—W. Australia Geol. Survey, Bull.; 1912; $2. Reprinted in W. Australian Mng. Jnl., May15,1912; p. 12; June1, p. 12; June8, p. 6; June15, p. 12; June22, p. 12; June29, p. 12; July6, p. 12; July13, p. 20; July20, p. 12; 30,000 w*; $1.50.

Bordeaux. — *Vladivostok District.* — See Zinc.

Brewer, W. M.—*Mineral Resources of the Kenai Peninsula.*—M. & S. P., Nov.23,1912; p. 662; 1200 w; 20c.

Brooks, A. H.—*Gold Deposits near Valdez, Alaska.*—U. S. Geol. Survey, Bull. 520-D; 1912; 27 pp.*; 20c.

Brown, Al. O.—*The Murchison Range;* [Antimonial and pyritic ores of Leydsdorp district, Northern Transvaal].—Mng. Mag., Oct., p. 279; 2100 w*; 45c.

Calkins, F. C., and E. L. Jones, Jr.—*Geology of the St. Joe-Clearwater Region, Idaho.*—U. S. Geol. Survey, Bull. 530-G; pp. 12-23*; 10c.

Camsell, C.—*Fraser Canyon and Vicinity, B. C.; Lillooet Mining Division and Skagit Valley, B. C.*—Canada Geol. Survey, Rep. f. 1911; 1912; pp. 108-123*.

Collins, W. M.—*Geology of Onaping Sheet, Ontario;* [Shining Tree and West Shining Tree gold fields].—Canada Geol. Survey, Rep. f. 1911; 1912; pp. 244-253.

Dalton.—*Geology of Venezuela.*—See under Petroleum.

Dumble, E. T.—*The Occurrence of Gold in the Eocene Deposits of Texas.*—Amer. Inst. of Mng. Engrs., Bull. No. 70; Oct., 1912; pp. 1021-1024.

Emmons and Larson.—*Geology and Ore Deposits of Creede, Colo.*—See Silver.

Faribault, E. R.—*Gold-Bearing Series of the Basin of Medway River, N. S.*—Canada Geol. Surv., Rep. f. 1911; 1912; pp. 334-341.

French, H.—*Mother Lode of the Klondike;* [Discusses early search for source of placer gold].—M. & S. P., July6,1912; p. 15; 1500 w; 20c.

Hill, J. M.—*Detrital Gold Deposits of Wilson Mesa, Utah;* [from U. S. Geol. Survey, Bull. 530-M; 1912].—Mng. Sci., July11, 1912; p. 23; 1800 w; 20c.

Hill, J. M.—***Notes on the Northern La Sal Mountains, Grand County, Utah.***—U. S. Geol. Survey, Bull. 530-M; 1912; 22 pp.*; 10c.

Hodge, W. R.—*West Shining Tree Gold District, Ontario.*—E. & M. J., Aug.24,1912; p. 343; 1600 w*; 25c.

Inglis, J. A. C.—*Genesis of a Gold Deposit; Conqueror Lode, the Peak, Cobar, N. S. W.*—Australian Mng. Standd., July4, 1912; p. 9; 1000 w; 35c.

Jacobs, E.—*Review of British Columbia Mines Report, 1911.* — See Platinum.

Johnson, J. L.—*Gold Deposits of the Seward-Sunrise Region, Kenai Peninsula, Alaska.*—U. S. Geol. Survey, Bull. 520-E; 1912; 47 pp.*; 10c.

King, O.—*The Past, Present and Future of Mineral Exploration in the Transvaal.*—S. Afr. Mng. Jnl., Anniversary No., Sept., 1912; p. 325; 3600 w*; $1.

Kraus, H. E.—*Geology of Harrison Gulch, Shasta County, California;* [Gold nickel deposits].—Amer. Inst. Mng. Engrs., Bull. 67; July,1912; pp. 709-717*; $1.15.

Lakes, A., sr.—*Geology of the Nickel Plate Gold Mine at Hedley, B. C.*—B. C.

Mng. & Engg. Record, July,1912; p. 386; 180 w; 35c.

Lawson, A. C.—*The Archaean Rocks of Rainy Lake* [Goldfield, Ont.].—Canada Geol. Survey, Rep. f. 1911; 1912; pp. 240-244.

LeRoy, O. E.—*Geology of Nelson Map Area, B. C.*—Canada Geol. Survey, Rep. f. 1911; 1912; pp. 139-158*;

Lincoln, F. C.—*Gold Deposits of Gibbonsville, Idaho.*—M. & S. P., July13,1912; p. 47; 2000 w; 20c.

Linton, R.—*Historical Sketch of Ocampo Mines;* [Rayon, Chihuahua].—E. & M. J., Sept.7,1912; p. 457; 3000 w*; 25c.

Linton, R.—*Geology of Ocampo District, Chihuahua;* [Silver-gold in fault planes in andesite].—E. & M. J., Oct.5,1912; p. 653; 2200 w*; 25c.

Locke, Aug.—*The Ore Deposits of Goldfield, Nev.*—E. & M. J., Oct.26, p. 797; Nov. 2, p. 843; 15,000 w*; 40c.

Maufe, H. B., and Lightfoot.—*The Geology of the Country Around Selukwe.*—Geol. Survey of South Rhodesia, Rep. f. 1911; pp. —; $1. Abstract in S. Afr. Mng. Jnl., Aug. 31,1912; p. 989; 3000 w; 35c.

McConnell, R. G.—*Reports on Observatory Inlet, Salmon River District, and Portland Canal Districts, B. C.*—Canada Geol. Survey, Rep. f. 1911; 1912; pp. 41-70*.

Moffit, F. H.—*Headwater Regions of Gulkana and Susitna Rivers, Alaska; with Accounts of the Valdez Creek and Chistochina Placer Districts.*—U. S. Geol. Surv., Bull. 498; 82 pp.*; 10c.

Palfy, M. von.—*Geologische Verhältnisse und Erzgänge der Bergbaue des siebenburgischen Erzgebirges;* [Geological relations and lodes of the mines in the Transylvanian Erzgebirge; transl. from the Hungarian of the Ungar. Geol. Ges., 1911].—Budapest, 1912; 297 pp.; $7 (book).

Rigaud, F.—*Alluvions métallifères;* [Geology, prospecting and development of placer deposits].—Rev. Univ. d. Mines, May, 1912; 53 pp.*; $1.15.

Rickard, T. A.—*Persistence of Ore in Depth;* [Chiefly on gold fields].—M. & S. P., Aug.24,1912; p. 232; Aug.31, p. 264; 7000 w; 30c.

Russell, M.—*Gold Discovery on the Broken River.*—Queensl. Govt. Mng. Jnl., Aug., 1912; p. 374; 1000 w*; 35c.

Schrader, F. C.—*Notes on the Antelope District, Nevada;* [Gold-silver].—U. S. Geol. Survey, Bull. 530-J; 1912; 14 pp*; 10c.

Schwarz, E. H. L.—*South African Geology.*—London, 1912; pp. — (book).

Smith, D. T.—*Vein Systems of the Comstock Lode.*—E. & M. J., Nov.9, p. 895; 1000 w*; 25c.

Smith, P. S.—*Notes on Mining in Seward Peninsula, Alaska.*—U. S. Geol. Survey, Bull. 520-M; 1912; 8 pp.; 10c.

Smith, P. S.—*The Alatna-Noatak Region, Alaska.*—U. S. Geol. Survey, Bull. 520-L; 1912; 26 pp.*; 10c.

Statz, B. A.—*Geology of the Cochiti Mining District. N. Mex.;* [Gold-silver in monzonite].—Mng. Sci., Oct.31,1912; p. 276; 1500 w*; 20c.

Statz, B. A.—*The New Placer Mining District;* [Golden and San Pedro, Santa Fé counties, N. Mex.; also copper].—Mng. Sci., Sept.12,1912; p. 167; 1100 w; 20c.

Thomson, J. A.—*Classification of the Rocks of the Western Australian Goldfields.*—Geol. Mag., April,1912; pp. 147-153; May, pp. 210-218*; $1.20.

Weed.—*Butte, Montana.*—See Copper.

Whitelaw, O. A. L.—*The Wedderburn Goldfield;* with *Petrographical Notes,* by D. J. Mahony.—Victoria Geol. Survey, Memoir 10; 1912; (book).

Wilson, J. B.—*The Hargreaves Goldfield, N. S. Wales;* [Saddle reefs, and geologic similarity to Bendigo].—Mng. & Engg. Rev., Oct.,1912; p. 11; 2800 w*; 35c.

Wolf, W. A.—*Sketch of the Geology of Equador;* [Goldfields; from T. Wolf's "Geografia y Geologia"].—M. & S. P., July27, 1912; p. 110; 1500 w*; 20c.

"Ego."—*N'Kandhla Banket Series;* [Opposes Draper's restriction of payable Banket series deposits to the Transvaal; discusses N'Kandhla or Insuze series in Zululand].—S. Afr. Mng. Jnl., June8,1912; p. 547; 2000 w; 35c.

"G. R."—*Far Eastern Rand Geology;* [Stratigraphy and continuity of the Van Ryn Reef to New Riefontein].—S. Afr. Mng. Jnl., July13,1912; p. 743; 2400 w; 35c.

"Rhinesuchus."—*Geology of the Witwatersrand;* [Criticism of Oliver's works].—S. Afr. Mng. Jnl., July13,1912; p. 737; 2000 w; 35c.

———. *Geology of the Witwatersrand.*—S. Afr. Mng. Jnl., Anniversary No., Sept., 1912; p. 343; 3000 w*; $1.

———. *Gold-Bearing Deposits of Mong Long, Hsipand State, Burma.*—India Geol. Survey, Records, Vol.42, Part 1; 1912; $2.

———. *Gold in the Banket Reefs; Is Main Reef the Only Payable Series?*—S. Afr. Mng. Jnl., June1,1912; p. 504; 2000 w; 35c.

———. *Gold in the Rand Banket;* [Sources].—S. Afr. Mng. Jnl., Aug.17,1912; p. 918; 1500 w; 35c.

———. *Gold Mining in West Africa.*—Mng. Mag., Aug.,1912; p. 90; 1000 w; 45c.

———. *Gold on the Pongola, Natal.*—S. Afr. Mng. Jnl., June22,1912; p. 611; 800 w; 30c.

———. *Lonely Reef;* [Rhodesia; enrichment of gold ores with depth].—Mng. Mag., June,1912; p. 405; 1000 w; table; 35c.

———. *Mineral Resources of Sumatra.*—Far Eastern Rev., May,1912; 2 pp.*; 75c.

———. *Mining Prospects in the Low Country;* [Murchison range, Transvaal; gold, mica, corundum].—S. Afr. Mng. Jnl., July13,1912; p. 742; 2000 w; 35c.

———. *Persistence of Rand Ore in Depth.*—S. Afr. Mng. Jnl., Oct.12, p. 176; 1300 w; 35c.

Depth.—S. Afr. Mng. Jnl., Oct.19, p. 208; 2000 w; 35c.

———. *The Anantapur Goldfield, Madras; India's New Goldfield.*—Mng. World (London), Oct.12,1912; Supplement: 8 pp*; 35c.

———. *The Far Eastern Rand.*—Mng. Mag., Sept.,1912; p. 170; 1000 w*; 35c.

———. *The Gold Fields of Dutch Guiana;* [Describes climatic and general conditions].—Mng. Investor, July29,1912; p. 185; 2100 w*; 25c.

———. *The Golden Valley and Shagari Gold Fields, Rhodesia.*—S. Afr. Mng. Jnl., Sept.28, p. 117; 1000 w; 35c.

———. *The Lawlers Goldfield, Western Australia.*—Mng. & Engg. Rev., Oct., p. 20; 1200 w; 35c.

———. *The Mine Centre Mining District, Ontario.*—Canadian Mng. Jnl., Sept.1, 1912; p. 584; 1300 w; 25c.

Miscellaneous (including production).

Andros, S. O.—*Conservation of Water in Placer Prospecting;* [Describes special rocker for prospecting desert gravels].—E. & M. J., June29,1912; p. 1266; 1000 w*; 25c.

Clifford, J. O.—*Conditions Affecting the Value of Gold.*—Mines & Methods, Oct., 1912; p. 32; 4500 w; 20c.

Daugherty, R. L.—*Annual Report of the South Dakota Mine Inspector.*—Mng. & Eng. World, Dec.14,1912; p. 1089; 1500 w; 10c.

Douglas, Jas.—*Historical Sketch of Gold and Copper Mining in Quebec.*—Canadian Mng. Jnl., July1,1912; p. 423; 1400 w; 25c.

Fricker, R. G.—*Reminiscences of the Rand in the '90s.*—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 208; 1000 w; $1.

Gascoyne, R.—*First Half-Year's Mining in the Transvaal,* 1912.—Mining & Engg. World, Oct.21,1912; p. 669; 1600 w; 10c.

Gunsaulus, E. N.—*Resources and Trade of Rhodesia.*—U. S. Consul. Rep., Nov.2, p. 593; 1000 w; 20c.

Harris, Sir David.—*What South Africa Owes to the Mining Industry.*—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 35; 1200 w; $1.

Hautpick, E. de.—*Gold Output of Russia in* 1911.—Mng. Jnl., Nov.2, p. 1064; 500 w; 35c.

Hoover, H. C.—*Approaching the Limit of Increasing Gold Production;* [Absence of probabilities of new accessions to production].—E. & M. J., Sept.14,1912; p. 490; 1500 w; 25c.

Hore, R. E.—*Porcupine's Future Looks Very Promising.*—Mining & Engg. World, Aug.3,1912; p. 197; 750 w*; 10c.

King, H. S.—*Annual Report of the Department of Mines for Western Australia for* 1911.—W. A. Mng., etc., Jnl., June22, 1912; p. 6; 4500 w; 45c.

King, H. S.—*Mining in Western Australia in* 1911; [Annual Dept. of Mines report; abstract].—M. & S. P., Aug.24,1912; p. 245; 700 w; 20c.

Martell, P.—*Der Goldbergbau in Sibirien;* [Development of the gold mining industry in Siberia, and comparison with output of rest of Russia].—Bergbau, July25,1912; p. 419; 4500 w; 35c.

McBride.—*British Columbia Mines Report for* 1911.—See under B. C.

Penrose, R. A. F.—*History of Gold Mining in the U. S.*—Popular Sci. Monthly, Feb., 1912; pp. —; 65c.

Prest, W. H.—*An Appeal for Co-Operation;* [Nova Scotian gold fields].—Canadian Mng. Jnl., Nov.1, p. 7421; 3000 w; 25c.

Pringle, R. W.—*The Rhodesian Smallworker.*—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 309; 4000 w*; $1.

Simmons, J.—*The First Half Year in* 1912 *in South Dakota.*—Mining & Engg. World, Aug.3,1912; p. 191; 3600 w*; 10c.

Stuart, J.—*The Rand* 16 *Years Ago and To-Day.*—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 89; 2000 w; $1.

Svimonoff, V. C.—*Data of Russia's Principal Mines and Oil Wells;* [Annual output, income, personnel, engine equipment, by companies and provinces; gold, platinum, iron, copper, silver-lead, manganese, oil, asbestos, coal].—E. & M. J., July13,1912; p. 80; 500 w; tables; 25c.

Tait, G. W.—*Gold Mine Accounts and Costing.*—London, 1912; $2 (book).

Thomas, E. H.—*The Nickel Plate Gold Mine;* [Geology, ores, milling; V. V. & E. Ry., B. C.].—Mex. Mng. Jnl., Nov., p. 38; 2400 w*; 25c.

Wendeborn, B. A.—*Golddiebstähle in den Gruben Siebenbürgens und Massregeln zur Verhütung derselben;* [Gold stealing in Transylvania mines and methods of prevention].—Erzbergbau, Sept.15,1912; p. 288; 2700 w; 45c.

West, H. E.—*Early Days at Kalgoorlie.*—Mng. Mag., June,1912; p. 435; 2700 w*; 45c.

Nevada State Journal.—*Souvenir Edition;* [Includes descriptions of various mining districts].—Reno; July28,1912; 96 pp.; 50c.

Rhodesia Chamber of Mines, Incorp.—*Report for the Year Ended Dec.* 31, 1911.—Bulawayo, 1912; 17 pp.; 50c. Abstract in S. Afr. Engg., May,1912; p. 83; 2000 w; 35c.

———. *A Round of the West African Mines;* [Successes and failures in 1911; present position].—Mng. World (London), Aug.10,1912; p. 168; 3000 w; 35c.

———. *American Institute of Mining Engineers; Spokane Section;* [Trip to Republic, Washington; review of camp and its metallurgy].—Mining & Engg. World, Aug. 17,1912; p. 291; 4000 w; 10c.

———. *Chief Productive Areas of the World.*—S. Afr. Mng. Jnl., Oct.12, p. 177; 2000 w; 35c.

———. *Dividends Declared by Rand Gold Mines,* 1887-1911.—S. Afr. Mng. Jnl., June29,1912; p. 662; 1000 w; tables; 35c.

———. *Dividends for the Half Year;* [Review of Transvaal and S. African gold, coal, tin, diamonds and holding corporations disbursements].—S. Afr. Mng. Jnl., July6,1912; p. 695; 1500 w; tables; 35c.

———. *Gold Coast in* 1912; [G. C. Colony and Ashanti; official mines report; summary].—Mng. Mag., Aug.,1912; p. 119; 400 w; 45c.

———. *Gold Mine Dividends for Half Year Ended June*30,1912; [Transvaal].—S. Afr. Mng. Jnl., June29,1912; p. 646; 500 w; tables; 35c.

———. *Great Boulder Propr., Kalgoorlie;* [Analysis of report for 1911].—Australian Mng. Standd., July25,1912; p. 77; 2000 w; 35c.

———. *La distribuzione dell'oro nel mondo;* [World's consumption of gold].—Rassegna Mineraria, July21,1912; p. 41; 1000 w; 35c.

———. *Mineral Production of the U. S. in* 1911. (U. S. Geol. Surv. publication).—Mg. & Eng. World, Dec.14,1912; p. 1007; 500 w; 10c.

———. *Six Months of Gold Winning;* [Rand returns, 1st half-year, 1912].—S. Afr. Mng. Jnl., Aug.24,1912; p. 953; 1000 w; tables; 35c.

———. *The Estimated Lives of Witwatersrand Mines.*—S. Afr. Mng. Jnl., Sept.21, p. 73; 1600 w; 35c.

———. *The Exhausted and Defunct Mines of the Rand.*—S. Afr. Mng. Jnl., Sept.21, p. 80; 100 w; table; 35c.

———. *The Future of Rand Mines;* [Indications of increasing profits]. — Mng. World (London), July6,1912; p. 15; 2500 w; 35c.

———. *The Future Output of Gold;* [From N. Y. "Sun"].—Mng. Mag., Oct., p 302; 1000 w; 45c.

———. *The Rand in the Past Half-Year;* [Profits and losses; dividends; costs].—Afr. World, July20,1912; p. 634; 1000 w; table; 35c.

———. *The Scandal of the Comstock.*—E. & M. J., Oct.19, p. 745; 2400 w*; 25c.

———. *The Zenith of Gold Output.*—S. Afr. Mng. Jnl., Oct.19, p. 204; 1300 w; 35c.

———. *Transvaal Gold Mining Dividends;* [1887-1911].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 328; 1800 w; $1.

———. *Victorian Mines in* 1911; [Review of official report].—Mng. Jnl., Sept.21,1912; p. 917; 1000 w; 35c.

———. *Western Australia;* [Review for 1911].—Mng. Jnl., Nov.2, p. 1057; 1300 w; 35c.

Amalgamation.

See Mill and Milling.

Cyaniding, etc.

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Dredging.

See Part 2 of Index (Mill and Milling).

SILVER.

Mines and Mining and Geology.

See also Cyaniding (Mill and Milling).

Allan, J. A.—*Geology of Field Map Area, B. C.;* [Lead-zinc-silver].—Canada Geol. Survey, Rep. f. 1911; 1912; pp. 175-187*.

Bell, R. N.—*The Lawrence Mine;* [Silver-lead, Clarksfork, Idaho].—N. W. Mng. News, Sept.,1912; p. 103; 1000 w; 25c.

Bordeaux. — *Vladivostok District.* — See Zinc.

Boutwell, J. M.—*Geology and Ore Deposits of the Park City District, Utah.*—U. S. Geol. Survey, Prof. Paper No. 77; 231 pp.*; 20c.

Brown, G. E.—*An Unusual Zonal Arrangement of Tin Ore in a Vein;* [Surface zone of oxidized workable tin overlying zone of silver ore, east of Lake Poopo, Oruro district, Bolivia].—Mng. Jnl., June15,1912; p. 611; 1600 w*; 35c.

Butler, —. *Recent Developments at Leadville, Colo.*—See under Lead.

Calkins, F. C., and E. L. Jones, Jr.—*Geology of the St. Joe-Clearwater Region, Idaho.*—U. S. Geol. Survey, Bull. 530-G; pp. 12-23*; 10c.

Denis, T. C.—*Ungava.*—Canadian Mng. Jnl., July1,1912; p. 442; 2100 w*; 25c.

Dunlop, J. P.—*Central States in* 1911; *Mine Production.*—See under Zinc.

Eakle, A. S.—*The Minerals of Tonopah, Nev.*—Univ. of Cal., Dept. of Geol'y, Bull.; 1912; 20 pp.*; 65c.

Emmons, W. H., and E. S. Larsen.—*Preliminary Report on the Geology and Ore Deposits of Creede, Colo.;* [Chiefly silver; also lead, gold, zinc].—U. S. Geol. Survey, Bull. 530-E; 1912; 26 pp*; 20c.

Fishback.—*Organ Mtns., N. Mex.*—See Copper.

Gama, F. P.—*El Porvenir Mine in the District of Mallama, Colombia.*—M. & S. P., July13,1912; p. 46; 2000 w*; 20c.

Grothe, A., and Salazars, L.—*La Industria Minera de México: Tomo I—Estados de Hidalgo y de México;* [The mining industry of Mexico: Vol. I—States of Hidalgo and Mexico].—Mexico City, 1912; 304 pp.; $1.50.

Günthersberger, J.—*Aus der frühesten Geschichte des Bergbaues in Böhmen;* [The earliest history of mining in Bohemia up to 1854; with directory of ancient mines].—Zentral Verbd. Bergbau Betriebsl. Oestr., Zts.; Sept.15,1912; p. 533-573*; 50c.

Haeberle, A. T.—*Southern Honduras.*—U. S. Consul. Rep., Aug.22,1912; p. 945; 2000 w; 20c.

Hafer, Claude.—*Historical and Mining Notes of Sonora, Mex.*—Mg. & Eng. World, Nov.16,1912; p. 908; 2500 w; 10c.

Hale, Fred A., Jr.—*The Yellow Pine Mining District, Nev.*—Mex. Mg. Jnl., Dec., 1912; p. 29; 2500 w*; 25c.

Hale, F. A.—*The Yellow Pine Mill;* [Nevada; Zinc-silver-lead].—Salt Lake Mng. Rev., Jnly30,1912; p. 33; 1200 w; 25c.

Hale, F. A., Jr.—*Yellow Pine Mill, Goodsprings, Nevada;* [Zinc-lead-silver].—E. & M. J., July13,1912; p. 68; 1500 w*; 25c.

Hamm, T. C.—*Progress in Durango.*—Mex. Mng. Jnl., Oct., p. 27; 1600 w; 25c.

Harrington.—*South America.*—See under Copper.

Hedley.—*Br. Columbia.*—See Copper.

Hershey, O. H.—*Genesis of the Lead-Silver Ores in Wardner District, Idaho;* [Reply to Ransome].—M. & S. P., Sept.14,1912; p. 344; 3000 w; 20c.

Heym, W.—*Mining Industry of Japan;* [in German].—See under Zinc.

Higgins, W. C.—*The Chief Cons. Mng. Co., Eureka, Tintic District, Utah.*—Salt Lake Mng. Rev., Oct.30, p. 11; 1800 w*; 25c.

Higgins.—*Mt. Nebo, Utah.*—See Lead.

Hore, R. E.—*Silver Mining at Cobalt, Ont.*—M. & S. P., July20,1912; p. 74; 2000 w*; 20c.

Hoskin.—*Eagle Canyon, Colo.*—See Zinc.

Jacobs, E.—*Review of Brit. Columbia Mines Report,* 1911. See Platinum.

Jacobs, E.—*Slocan City Mining Division, B. C.—Canadian Mng. Jnl.,* Sept.1,1912; p. 592; 2800 w; 25c.

Jimenez, C. P. *Estadistica minera en* 1909 *y* 1910; *Peru.*—See Copper.

Krümmer.—*Geology of Silver-Lead-Zinc Vein Systems, Ems, Germany.*—See Zinc.

LeRoy, O. B.—*Geology of Nelson Map Area, B. C.*—Canada Geol. Survey, Rep. f. 1911; 1912; pp. 139-158*.

Linton, R.—*Geology of Ocampo District, Chihuahua;* [Silver-gold in fault planes in andesite].—E. & M. J., Oct.5,1912; p. 653; 2200 w*; 25c.

Martin, Al. H.—*The Way Things Look at Tonopah Today.*—Mines & Methods, Sept., 1912; p. 13; 3000 w*; 25c.

Martell.—*Mining in Bolivia.*—See Tin.

Matteson, W. G.—*Mining Problems at Santa Gertrudis, Pachuca.*—E. & M. J., Sept.21,1912; p. 547; 4200 w*; 25c.

McBride.—*British Columbia Mines Report for* 1911.—See under Zinc.

McCaskey.—*Silver in Eastern States,* 1911; *Mine Production.*—See Zinc.

Neumann.—*Metallurgy in* 1911 [in German].—See Tin.

Ransome, F. L.—*Genesis of the Lead-Silver Ores of Wardner District, Idaho.*—

M. & S. P., Aug.3, 1912; p. 143; 2200 w; 20c.

Read, T. T.—*Impressions of the Comstock.*—M. & S. P., Aug.24,1912; p. 244; 2000 w; 20c.

Reinecke, L.—*Beaverdell Map Area, Yale District, B. C.*—Canada Geol. Survey, Rep. f. 1911; 1912; pp. 130-133.

Roberts, M.—*Prince of Wales Island, Alaska;* [Silver and cupriferous magnetite].—B. C. Mng. & Engg. Record, July,1912; p. 370; 500 w; 35c.

Schofield, S. J.—*Origin of the Silver-Lead Deposits of East Kootenay, B. C.*—Econ. Geol'y, June,1912; pp. 351-364*; 65c.

Schofield, S. J.—*Reconnaissance in East Kootenay;* [Silver-lead-zinc].—Canada Geol. Survey, Rep. f. 1911, pp. 158-164*.

Schrader, F. C.—*Notes on the Antelope District, Nevada;* [Gold-silver].—U. S. Geol. Survey, Bull. 530-J; 1912; 14 pp*; 10c.

Sheldon, G. L.—*Mining in the Morelos District;* [South of Batopilas, Chihuahua].—M. & S. P., June29,1912; p. 886; 2000 w*; 20c

Smith, D. T.—*Vein Systems of the Comstock Lode.*—E. & M. J., Nov.9, p. 895; 1000 w*; 25c.

Statz, B. A.—*Geology of the Cochiti Mining District, N. Mex.;* [Gold-silver in monzonite].—Mng. Sci., Oct.31,1912; p. 276; 1500 w*; 20c.

Stewart, C. A.—*The South Belt at Rossland, B. C.*—M. & S. P., July27,1912; p. 107; 1200 w*; 20c.

Stiles, A. H.—*Deertail Mining District;* [Stevens county, Wash.].—N. W. Mng. News, Nov., p. 15; 700 w; 30c.

Stinson, L.—*The Mineral Center of Northern Brit. Columbia;* [Hazleton district silver-lead resources].—B. C. Mng. & Engg. Record, May,1912; p. 301; 2200 w; 35c.

Thomae, W. F. A.—*Gold and Silver in Sumatra.*—Mng. Mag., June,1912; p. 433; 500 w; 45c.

Thomson, J. Allan.—*The Tellurides of Kalgoorlie.*—Jnl. Chamb. Mines (W. Aust.), Sept.,1912; p. 218; 4000 w; 75c.

Toll, R. H.—*Mineral Hill,* Nevada; [Eastern Eureka county; silver district].—M. & S. P., June29,1912; p. 888; 2500 w*; 20c.

Tuttle, Edgar G.—*The Magdalena Mining District, N. Mexico.*—M. & M., Dec., 1912; p. 275; 35c.

Umpleby, J. B.—*A Preliminary Account of the Ore Deposits of the Loon Creek District, Idaho.*—U. S. Geol. Survey, Bull. 530-G; 1912; pp. 3-11*; 10c.

Van Horn, F. R.—*The Occurrence of Silver, Copper and Lead-Ores at the Veta Rica Mine, Sierra Mojada, Coahuila, Mex.;* [Geology and genesis].—Amer. Inst. Mng. Engrs., Bull. 68, Aug.,1912; pp. 867-882*; $1.15.

Ward, L. K.—*The Silver-Lead Lodes of the Waratah District.*—Tasmania Mines Dept. Bull.; 1912; pp. —; $1.50.

Watson, J.—*A Trip to the Joriquipa Camp;* [Oputo, Sonora].—Mex. Mng. Jnl., Aug.,1912; p. 19; 600 w; 25c.

Weed, W. H.—*Geology and Ore Deposits of the Butte District, Montana.*—U. S. Geol. Survey, Prof. Paper No. 74; 1912; 262 pp.*; 50c.

Wentworth, I. H.—*The San Nicolas Mining District, San Nicolas, Tamaulipas, Mex.*—Amer. Inst. Mng. Engrs., Bull. 68, Aug., 1912; pp. 843-752*; $1.15.

Weston.—*Mogollon District.* — See N. Mexico.

Wise, O. B.—*Ruby District, Washington.*—Mng. News, Sept.,1912; p. 101; 1000 w; 25c.

Zelaya, C.—*The Chanarcillo Mining District, Chile.*—Mex. Mng. Jnl., July,1912; p. 17; 1200 w; 35c.

Zwicky, W. E.—*Rambler-Cariboo Mine, McGuigan Basin, Slocan, B. C.;* [Silver-lead ores, ore-bodies, and geology].—Canadian Mng. Jnl., July20,1912; p. 501; 2500 w; 25c.

Nevada State Journal.—*Souvenir Edition;* [Includes descriptions of various mining districts].—Reno; July28,1912; 96 pp; 50c.

———. *Austrian Mines.*—Mg. Jnl., (London), Nov.16,1912; p. 1115; 2000 w; 35c.

———. *Cobalt, Ont.*—Mng. Mag., Sept., 1912; p. 172; 1000 w; 35c.

———. *Mine and Mill Production, Germany,* 1909-1910.—See under Lead.

———. *Mines of Mitsu Bishi Goshi-Kwaisha, Japan;* [Describes the properties of the Mitsu Bishi Co., owning 21 metal and coal mines].—Mg. & Eng. World, Nov. 23,1912; p. 941; 5000 w*; 10c.

———. *New Work at Aspen* [Pitkin County, Colo.].—M. & S. P., Sept.7,1912; p. 301; 2500 w*; 20c.

———. *North Fork of Salmon River;* [Nelson division, Kootenay, Br. Columbia]. B. C. Mng. & Engg. Record, April,1912; p. 272; May, p. —; 6000 w; 65c.

———. *Queensland,* 1911.—Mng. Jnl., Aug.3,1912; p. 767; 2000 w; 35c.

———. *Stanthorpe District, Queensland.*—See under Tin.

———. *Tigre Mining Co. Costs;* [Sonora.—E. & M. J., Aug.31,912; p. 401; 500 w; 25c.

———. *The Emily-Edith Mine, Slocan, B. C.;* [Silver-lead].—Canadian Mng. Jnl., June15,1912; p. 410; 1600 w; 25c.

Metallurgy, Chemistry, Cyaniding, Etc.

Buskett, E. W.—*Cyanidation of the Granite-Bimetallic Tailings;* [Philipsburg, *Mont.;* 1,000,000 tons of $3 silver talings].—Mining & Engg. World, Aug.17,1912; p. 283; 4500 w*; 10c.

Coghill, W. H.—*Copper and Sulphur in Cyanide Solution;* [Difficulties in silver extraction].—M. & S. P., Aug.17,1912; p. 203; 2700 w; 20c.

Cornwall, W. H.—*Concentrating Low-Grade Silver-Lead Ore at Aspen, Colo.*—Met. & Chemi. Engg., Oct.,1912; p. 652; 1000 w*; 35c.

Cowles, R. K.—*Precipitation of Gold and Silver by Carbon.* (Proc. Aust. Inst. M. E.)—M. & S. P., Dec.7, 1912; p. 730; 1800 w*; 20c.

Dobbins, W. J., and H. G. S. Anderson.—*Buffalo Mine and Mill, Cobalt, Ont.;* [Reviews mining and milling practice].—E. & M. J., Aug.3,1912; p. 211; 6500 w*; 25c.

Eurich, E. F.—*Development of the Parkes Process for Desilverizing Lead in the U. S.;* [Read to Internatnl. Congr. of Appl. Chem'y; abstract].—Met. & Chemi. Engg., Sept.12,1912; p. 597; 750 w; 35c.

Fink, C. G.—*Smelting Cobalt-Silver Ores*

by Vacuum Electric Furnace; [Read to Amer. Electrocheml. Soc.; abstract].—Mining & Engg. World, Oct.5,1912; p. 627; 600 w; 10c.

Forbest, D. L. H.—*Treatment of Complex Silver Ore at the Lucky Tiger Mine, El Tigre, Sonora, Mex.*—Amer. Inst. Mng. Engrs., Bull. 68, Aug.,1912; pp. 769-810*; $1.15.

Goodale, S. L. and H. C. Ray.—*The Pennsylvania Smelting Co. Plant;* [Carnegie, Pa.; chiefly for high-grade silver-lead].—M. & S. P., July27,1912; p. 104; 2200 w*; 20c.

Goosman, J. G.—*Refining Cyanide Precipitate at Waihi, N. Z.;* [from Australian Mng. Standd.].—Mex. Mng. Jnl., Sept.,1912; p. 26; 600 w; 25c.

Goosman, J. G.—*The Waihi Mill, N. Z.; Ore Reduction and Cyaniding.*—Australian Mng. Standd., Aug.8,1912; p. 132; 1000 w; 35c.

Hardinge, H. W.—*Wet Concentration of Furnace Slags.*—E. & M. J., June29,1912; p. 1262; 1100 w; 25c.

Hart, J. P. and H. D. Williams.—*West End Consol. Mill, Tonopah;* [All-sliming plant extracting 90.4% on $17 silver ore at cost of $3.52 per ton].—E. & M. J., July27, 1912; p. 163; 4500 w*; 25c.

Herwegen, L.—*Die Schwimmverfahren;* [Flotation processes].—See Zinc.

Kuhn, E.—*Considérations chimiques sur la cyanuration des minerais d'argent;* [Chemical considerations in the various processes of cyaniding silver ores; French abstract from "Metallurgie," 1911, pp. 399-404, 421-436; 464-472, 481-492].—Rev. d. Métal'gie, June,1912; p. 313; 2100 w*; $1.15.

Lacey, Wm. N.—*Electrolytic Refining of Silver-Bismuth Alloys;* [Read to Amer. Electro-cheml. Soc.; abstract].—Met. & Cheml. Engg., Nov.,1912; p. 747; 700 w; 35c.

Livingston, D. C.—*Fire Assay Charges.*—M. & S. P., Oct.12, p. 468; 1800 w; 20c.

MacDonald, B.—*Veta Colorado Mill and Cyanidation Plant;* [Parral Chihuahua].—M. & S. P., July6,1912; p. 4; July13, p. 40; 7000 w*; 30c.

Megraw, N. A.—*Cyanidation in the Cobalt District, Ont.*—E. & M. J., Nov.2, p. 837; 5000 w*; 25c.

Mueller, J. G.—*Grinding Practice at McKinley-Darragh Mill, Cobalt, Ont.*—E. & M. J., Aug.31,1912; p. 408; 1000 w; 25c.

Rickard, T. A.—*Cyanidation-Amalgamation;* [at Cobalt, Ontario].—Mng. Mag., June,1912; p. 452; 1000 w; 45c.

Tremoureux, R. E.—*A Successful Treatment of Concentrates by Cyanidation.*—Mex. Mg. Jnl., Dec.,1912; p. 18; 1200 w; 25c.

Trenkner.—*The Assay for Gold, Silver and Platinum;* [at the Berlin mint; translated by O. H. Hahn].—E. & M. J., June29, 1912; p. 1280; 1200 w; 25c.

Tweedy, G. A., and R. L. Beals.—*Costs of Stamping, Leaching, Sliming and Filtering Gold-Silver Ores of Minas del Tajo, Rosario, Sinaloa;* [Extract from Amer. Inst. Mng. Engrs., Trans. Vol. 41].—E. & M. J., June 22,1912; p. 1226; 800 w; 25c.

Watson, R. B.—*Nipissing High-Grade Mill, Cobalt, Ont.*—E. & M. J., Dec.7,1912; p. 1077; 3500 w*; 25c.

Wentworth.—*Electrostatic Concentration; Huff Processes.*—See under Zinc.

Wood.—*Flotation Process.*—See Molybdenum.

Young, George J.—*Testing the Filtration Rate of a Slime.*—Mex. Mg. Jnl., Dec., 1912; p. 36; 2000 w*; 25c.

———. *Greenside Mine, England;* [Lake district, Westmoreland; argentiferous lead mining and milling; slime plant].—E. & M. J., Sept.7,1912; p. 460; 1300 w; 25c.

———. *New Plants at Broken Hill; Junction North Hill.*—See under N. S. Wales.

———. *Present Smelting Rates in Utah.*—E. & M. J., July20,1912; p. 125; 1500 w; 25c.

———. *The Ophir Cyanidation Plant;* [Nevada].—M. & S. P., Nov.30,1912; p. 703; 700 w; 20c.

Miscellaneous.

Bowie, C. P.—*History of the Granite Mountain Mines, Montana.*—M. & S. P., Oct. 12, p. 406; 2200 w*; 20c.

Cole, A. A.—*The Relation of Transportation to Mining in Cobalt.*—Can. Mg. Jnl., Dec.1,1912; p. 795; 2000 w; 30c.

Döring.—*Progress in Metal Analysis,* 1911; [in German].—See under Copper.

Fischer and Stecher.—*Rapid Electroanalysis* [in German].—See Copper.

French, H.—*New Volumetric Methods in Vogue at Mints.*—Mining & Engg. World, Nov.9, p. 853; 3500 w; 10c.

Handy, J. O.—*Sampling and Assaying of Silver Ores Containing Cobalt, Nickel and Arsenic;* [Cobalt, Ont., ores, at Penna. Smeltg. Co., Carnegie, Pa., and at Pittsburgh Testg. Laboratory; read to 8th Internatnl. Congr. of Applied Chem'y; abstract].—Met. & Cheml. Engg., Oct.,1912; p. 688; 1500 w; 35c.

Irvin, Donald F.—*Disposal of Tailing at El Tigre, Sonora, Mex.*—M. & S. P., Dec.7, 1912; 727; 2500 w*; 20c.

Raydt.—*Gold-Silver Alloys.*—See Alloys.

"Mining Accountant."—*Australian Big Mines;* Examinations of Their Reports; 16: Broken Hill South, N. S. W.; 17: Broken Hill Propr., N. S. W.—Australian Mng. Standd., Aug.29,1912; p. 199; Sept.5, p. 221; 4000 w; 50c.

———. *Australasian Institute of Mining Engineers; New South Wales Trip,* 1912.—See under New South Wales.

———. *Broken Hill Mines;* [Effect of the rise in metals in extending development].—Mng. World (London), Sept.14, 1912; p. 316; 2000 w; 35c.

———. *The Waihi Co. in* 1911.—M. & S. P., Aug.10,1912; p. 174; 600 w*; 20c. Also in E. & M. J., Aug.17, p. 305; 1200 w; 25c.

———. *Thornthwaite Mine, England;* [Silver-lead-zinc mine and milling, Lake district, Cumberland].—E. & M. J., Aug.10, 1912; p. 270; 1000 w; 25c.

———. *Wettlaufer-Lorraine Costs;* [S. Lorrain, Ont., 4166 tons of ore; total cost, 24.684 c. per oz.].—E. & M. J., Aug.31, 1912; p. 401; 400 w; 25c.

PLATINUM.

See also Cyaniding (Mill and Milling).

Bailey, Frank.—*Platinum Near Princeton, B. C.*—M. & M., Dec.,1912; p. 287; 500 w; 35c.

Chourlguine, M.—*Sur les Alliages du Platine avec l'aluminum;* [The alloys of platinum with aluminum].—Revue de Métallurgie, Nov.,1912; p. 874; 2000 w*; $1.15

Crookes, Sir Wm.—*The Volatility of the Platinum Group of Metals;* [Read to Roy. Soc.; brief abstract].—Mining & Engg. World, Aug.10,1912; p. 262; 500 w; 10c.

Döring, Th.—*Fortschritte auf dem Gebiete der Metallanalyse im Jahre* 1911; [Progress in metal analysis in 1911; (3): iron, steels and ferro-alloys; nickel-cobalt; platinum metals].—Chemiker Ztg., July4, 1912, p. 759; 4500 w; 65c.

Harrington, C. L.—*Mineral Resources of South America.*—See under Copper.

Hautpick, E. de.—*Platinum Market Interregnum;* [Decree of the Duma of June, 1912, controlling Russian platinum mining and marketing].—Mng. Jnl., Oct.26, p. 1039; 1000 w; 35c.

Hautpick, E. de.—*Osmiridium;* [Properties and occurrences].—Mng. Jnl., Aug.24, 1912; p. 851; 3000 w; 35c.

Hautpick, E. de.—*Platinum and the Platinum Group;* [The metals; geology and genesis of lodes and placers].—Mng. Jnl., July13,1912; p. 698; July27, p. 747; 4500 w; 50c.

Horton, F. W.—*Iridium in American Placer Platinum.*—E. & M. J., Nov.9, p. 873; 3000 w*; 25c.

Horwood, C. B.—*Iridosmine from the New Rietfontein Mines, Its Occurrence, Analysis and Genesis.*—S. Afr. Mng. Jnl., May18,1912; p. 430; May25, p. —; 4000 w; 50c.

Jacobs, E.—*Annual Report of Minister of Mines, British Columbia;* [Review of report for 1911; 1: gold, silver, lead, zinc, copper, iron, platinum; 2: concentrating mills, French process, Hidden Creek mines].—Mining & Engg. World, July20, 1912; p. 99; July27, p. 149; 7000 w; 20c.

Also reviewed by Jacobs in Canadian Mng. Jnl., July15,1912; p. 495; 2500 w; 25c.

Jones, T. H.—*Working the Tasmanian Osmiridium Placers.*—Mng. & Engg. Rev., Aug.,1912; p. 405; 1500 w; 35c.

Keller, Harry F.—*Platinum: The Most Precious of the Metals.*—Jnl. Fr. Inst., Nov.,1912; 20 p.*; 75c.

Koukline, E. V.—*Quelques mots sur l'analyse du minerai de platine;* [Notes on the analysis of platinum ores].—Rev. de Métall'gie, Oct.,1912; pp. 815-824; $1.15.

Lindgren, W.—*The Production of Platinum and Allied Metals in* 1911.—U. S. Geol. Survey, Mineral Resources for 1911; 1912; 19 pp; 10c.

Müller, L. von.—*Zur Kenntnis der Platinmetalle;* [Notes on the platinum metals].—Erlangen dissertation, 1912; 38 pp; $1.50 (Thesis).

Pina de Rubies, S.—*Estudio acerca de la dunita platinifera de los Urales;* [Chemical and petrographic study of the platiniferous dunite of the Urals].—R. Acad. d. Ciencias Madrid, Rev.; Vol. 10, 1911; pp. 151-186.

Sander.—*Palladium-Antimony Alloys.*—See under Alloys.

Sontag, J.—*Kolumbien als Platinproduktionsland;* [Colombia as a platinum producer].—Bergwirts. Mittlngn., Aug.,1912; p. 143; 2000 w; 75c.

Svimonoff.—*Data of Russia's Principal Mines and Oil Wells.*—See under Gold.

Trenkner.—*The Assay for Gold, Silver and Platinum;* [at the Berlin mint; translated by O. H. Hahn].—E. & M. J., June29, 1912; p. 1280; 1200 w; 25c.

Watkins, L. and S. Alexander.—*Iridosmine from the New Reitfontein Mine; and, Platinum in the Black Reef;* [Witwatersrand].—S. Afr. Mng. Jnl., June1,1912; p. 521; 1000 w; 35c.

———. *Der Uraler Platinindustrie I. J.* 1911; [Urals platinum production in 1911].—Riga Industrie Ztg., July15,1912; p. 203; 500 w; 35c.

———. *Platingewinnung;* [Metallurgy of platinum].—Kohle & Erz, Oct.21, p. 1114; 800 w; 35c.

———. *Platingewinnung;* [Recovery and metallurgy of platinum ores].—Organ d. Bohrtechniker, Oct.15, p. 244; 600 w; 45c.

———. *Platinum Deposits in Mongolia.*—M. & S. P., Nov.9, p. 597; 300 w; 20c.

———. *Platinum;* [Occurrences, properties and preparation].—Cheml. Engr., Sept., 1912; p. 98; 3000 w; 35c.

———. *Platinum in British Columbia.*—B. C. Mng. & Engg. Record, June,1912; p. 337; p. 348; 6000 w*; 35c.

———. *Russian Platinum Industry.*—M. & M., Dec.,1912; p. 286; 1000 w; 35c.

CHAPTER II.

COPPER.

Mines and Mining.

Adams, L. D.—*The Weedon (McDonald) Mine, Weedon, Quebec.*—Canadian Mng. Jnl., July1,1912; p. 467; 1500 w; 25c.

Bain, H. F.—*The Besshi Mine and Shisaka Smelter.*—M. & S. P., Sept.21,1912; p. 363; 2500 w*; 20c.

Bain, H. F.—*Improvements at Ashio Mines and Mills.*—M. & S. P., Aug.24,1912; p. 239; 2000 w*; 20c.

Ball, L. C.—*Notes on the Many Peaks Mine;* [Geology of low-grade copper mine]. —Queensland Govt. Mng. Jnl., May,1912; p. 209; 1800 w*; 35c.

Bamberger, Clarence G.—*The Mining of Copper Deposits.*—Mex. Mg. Jnl., Dec., 1912; p. 19; 2000 w; 25c.

Bond, Jos.—*Peculiarities in the Drift;* [Some irregular pay shoots in southwestern copper veins].—E. & M. J., Oct.12, p. 679; 2500 w*; 25c.

Bordeaux. — *Vladivostok District.* — See Zinc.

Brodrick, C. T.—*Gold with Copper Ore;* [Ratio in Kyshtim pyrite ores].—Mng. Mag., June,1912; p. 431; 200 w; 35c.

Brooks, A. H.—*Alaska Mining Industry in* 1911.—U. S. Geol. Survey, Bull. 520-A; 1912; 90 pp*; 20c.

Butler, B. S.—*Production of Copper in* 1911; [Mine, smelter and refinery statistics in U. S.].—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 63 pp; 20c.

Calderwood, J. M.—*The Messina, Transvaal, Development Co., Ltd.*—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 218-222; 3500 w*; $1.

Calkins, F. C.—*Mines of the Globe-Miami District.*—M. & S. P., Aug.24,1912; p. 237; 2500 w*; 20c.

Campbell, G.—*Katanga Developments;* [Report of British vice-consul].—M. & S. P., Sept.28,1912; p. 408; 600 w; 20c.

Carmichael, N.—*Rapid Mine Tunneling in Arizona;* [Haulage adit, with 2 9000-ft. legs, for conveying ore from mine to mill. Ariz. Copper Co., Clifton].—E. & M. J., Aug. 17,1912; p. 295; 4200 w*; 25c.

Clapp, C. H.—*Southern Vancouver Island.* —See under Coal.

Clifford, J. O.—*Chino Mines and Methods.*—Mines & Methods, Aug.,1912; p. 547; 500 w*; 25c.

Conder, H.—*The Mt. Lyell Co.'s Property;* [Ore bodies]. — Australian Mng. Standd., Aug.1,1912; p. 107; Aug.8, p. 131; 3000 w*; 50c.

Coulant, M. E.—*Note sur les Mines de Cuivre d'Arghana, Vilayet de Diarbékir (Asie Minoure);* [The copper mines of Arghana, province of Diarbékir (Asia Minor)].—Annales de Mines (Paris), Oct., 1912, p. 281; 3500 w*; 65c.

Denis, T. C.—*Annual Report, Quebec Dept. of Mines,* 1911.—See under Silver.

Dinsmore, C. A.—*Holdings and Operations of the Savanna Copper Co.;* [Burro Mts., Chloride Flat, Silver City and Pinos Altos districts, Arizona].—Mining & Engg. World, June29, 1912; p. 1358; 1000 w; 10c.

Douglas, Jas.—*Historical Sketch of Gold and Copper Mining in Quebec.*—Canadian Mng. Jnl., July1,1912; p. 423; 1400 w; 25c.

Drysdale, C. W.—*Franklin Mining Camp, West Kootenay, B. C.*—Canada Geol. Survey, Rep. f. 1911; pp. 133-139.

Dunlop, J. P.—*Central States in* 1911; *Mine Production.*—See under Zinc.

Fishback, M.—*The Organ Mining District, N. Mex.;* [Copper, copper-zinc-lead, silver-lead].—El Paso Mng. Jnl., Oct.,1912; p. 11; 2000 w; 35c.

Forbes, D. G.—*Hidden Creek Mines;* [From B. C. Minister of Mines report f. 1911].—NW. Mng. News, Oct.,1912; p. 9; 1400 w; 35c.

Friedensburg.—*Mining Industry in Cornwall and Devonshire;* [in German].—See Tin.

Goodchild, W. H.—*Valuation of Base-Metal Mines.*—Mng. Mag., July,1912; p. 50; 2100 w; 45c.

Griffiths, J. L., H. L. Washington, and others.—*The World's Copper Industry;* [Gt. Britain, France, Russia, German S. W. Africa, Japan, U. S.].—U. S. Consul. Rep., Sept.18,1912; p. 1409-1420; 20c.

Hafer, Claude.—*Historical and Mining Notes of Sonora, Mex.*—Mg. & Eng. World, Nov.16,1912; p. 908; 2500 w; 10c.

Hall, A. L.—*Palabora Copper District, Murchison Range, Transvaal.*—Mng. Mag., Oct., p. 282; 500 w; 45c.

Hamm, T. C.—*Progress in Durango.*—Mex. Mng. Jnl., Oct., p. 27; 1600 w; 25c.

Harrington, C. L.—*Mineral Resources of South America;* [Peru (copper, silver, gold, lead, vanadium)].—Colo. School of Mines Mag., July,1912; p. 227; 2100 w; 50c.

Harrington, C. L.—*Mineral Resources of South America. II;* [Peru (mercury, bismuth, tungsten, oil, coal, salt); Bolivia (gold, silver, tin, copper, bismuth, tungsten, coal); Chile (copper, nitrates, gold, silver, lead, iron, coal, tin, tungsten, borax, salt); Brazil (iron, manganese, gold, copper, monazite, diamonds, coal, salt, tungsten); Colombia (gold, emeralds, copper, platinum, iron)].—Colo. School of Mines Mag.; Aug.,1912: p. 253; 7000 w; 50c.

de Hautpick, E.—*Copper Mines of the Urals.*—Mng. Jnl., July6,1912; p. 672; 1800 w; 35c.

Hedley, R. R.—*Mineral Industry of British Columbia;* [Discusses coal, iron, copper, silver-lead, gold developments and possibilities; address to Vancouver Progress Club].—B. C. Mng. & Engg. Record, April, 1912; p. 268; 4200 w; 35c.

Heym, W.—*Die Mineralquellen Japans;* [Mining laws, development and present industry in Japan; I: copper, gold, silver].—Kali Erz & Kohle, July5,1912; p. 663; 3000 w; 35c.

Higgins, W. C.—*California-Utah Gold-Copper Mines;* [Doyle, Utah].—Salt Lake Mng. Rev., Nov.15, p. 15; 1000 w*; 25c.

Horwood, C. B.—*Iridosmine from the New Rietfontein Mines, Its Occurrence, Analysis and Genesis.*—S. Afr. Mng. Jnl., May18,1912; p. 430; May25, p. —; 4000 w; 50c.

Jacobs, E.—*Review of Brit. Columbia Mines Rep.,* 1911. See Platinum.

Jacobs.—*Slocan District, B. C.*—See Lead.

Jimenez.—*Estadistica minera en* 1909 *y* 1910, *Peru.*—See under Petroleum.

Jimenez, C. P.—*Estadistica Minera en* 1909 *y* 1910; [Statistics of mineral production in Peru in 1909 and 1910; coal, oil; gold, silver, copper, lead, antimony, vanadium, bismuth, tungsten, mercury, molybdenum, borates, salt].—Peru Cuerpo de Ingrs. de Minas, Bol. No. 77; 1912; 77 pp; $1.

Jones, N.—*Copper Deposits, Beltana, S. Australia.*—Australian Mng. Standd., July 4,1912; p. 7; 800 w; 35c.

Kershaw, J. B. C.—*Sources of the World's Copper Supply;* [Comparative production of various countries].—Cassier's Mag., Sept.,1912; pp. 249-258*; 35c.

King, A.—*Mining in the Territory of the Cia. de Moçambique.*—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 133; 4500 w*; $1.

de Lalande.—*L'Afrique cuprifère;* [Copper possibilities of the African continent].—Echo d. Mines, Aug.22,1912; p. 922; 1300 w; 35c.

Lane, A. C.—*Mine Waters;* [in Michigan copper country, and effect on ore deposition and concentration; from Mich. Geol. Survey Rep. f. 1909].—M. & S. P., Nov.9, p. 589; 2000 w; 20c.

Lane, A. C.—*Diamond Drilling at Point Mamainse, Ontario;* [Prospecting by Calumet & Hecla Co. for copper].—Canada Dept. Mines, Mines Branch, Bull. 6; 1912; 59 pp.*; 50c.

Livingston, D. C.—*Mining Methods at Nacozari, Sonora, Mex.;* [Shrinkage stoping with ultimate waste filling supplanting room-and-pillar workings]. — Amer. Inst. Mng. Engrs., Bull. 69; Sept.,1912; pp. 1009-1017*; $1.15.

Manning, I. A.—*Metals and Minerals of Colombia.*—U. S. Consul. Rep., Oct.31, p. 561; 1800 w; 20c.

McBride.—*British Columbia Mines Report for* 1911.—See under Zinc.

McCaskey.—*Copper in Eastern States,* 1911; *Mine Production.*—See Zinc.

Meuche, A. H.—*Development of the Copper Mines of Lake Superior and Their Geological Relations.*—Mich. Geol. Survey, Publication No. 6, 1912; pp. 887-931.

Montague, J. V.—*Cananea Con. Unit Costs.*—E. & M. J., Oct.26, p. 787; 1200 w; 25c.

Passow, J. M.—*The Eustis Mine, Quebec.* —Canadian Mng. Jnl., July1,1912; p. 463; 1000 w*; 25c.

Pickard, B. O.—*Bunker Hill Mining District of Pinal County, Ariz.*—Mng. Sci., Oct.31, p. 281; 1200 w; 20c.

Plummer, J.—*The Australian Copper Output in* 1911.—Mining & Engg. World, Sept.14,1912; p. 483; 600 w; 10c.

Raymond, R. W.—*Japan's Mining Industry.*—Oriental Rev., 1912, No. 5; pp. 278-283; 75c.

Read, T. T.—*The Nevada Douglas Mines;* [Yerington district, Nevada].—M. & S. P., Aug.17,1912; p. 206; 1800 w*; 20c.

Rice., C. T.—*Mining Copper at Lake Superior, VII;* [Rock houses; haulage and hoisting, and pillar mining, in amygdaloid mines].—E. & M. J., Aug.31,1912; p. 405; 3000 w*; 25c.

Rice, C. T.—*Copper Mining Practice at Lake Superior;* [(1), Northern mines, ore bodies, hoisting; (2), Inclined shafts, haulage and hoisting; (3), Chiefly on drilling practice].—E. & M. J., July20,1912; pp. 119-124; 5500 w*; (2), July27, p. 171; 5500 w*; (3), Aug.3, p. 217; 5000 w; 65c.

Ricketts, L. D.—*Work of the Cananea Copper Co.;* [From report for 1911].—M. & S. P., Nov.2, p. 565; 3500 w*; 20c.

Severy, C. L.—*The Poderosa Mine, Collahuasi, Chile;* [Argentiferous copper].—Mex. Mng. Jnl., Aug.,1912; p. 36; 2600 w*; 25c.

Simmons, J.—*Arizota Mng. Co.;* [Copper properties in Harcuvar Mtns., Yuma county, Arizona].—Mining & Engg. World, July 27,1912; p. 152; 900 w; 10c.

Svimonoff, —. *Russia's Principal Mines and Oil Wells.*—See under Gold.

Tupper, C. A.—*Copper Mining in Argentina.*—E. & M. J., Nov.9, p. 899; 1800 w; 25c.

Weyhmann, A.—*Der Bergbau auf Kupferlasur zu Wallerfangen a. d. Saar unter den lothringischen Herzögen,* 1492-1669; [Copper mining industry at Wallerfangen on the Saar, Prussia, during the Lorraine duchies, 1492-1669].—Saarbrücken, 1912 (Wirtschaftl. Studien, Heft 1); pp. —; (book).

Wilson, A. W. G.—*Copper and Pyrites;* [Review of Canadian developments in 1911]. —Canada Dept. Mines, Mines Branch, Rep. f. 1911; 1912; p. 90-94; 2400 w; $1.

Nevada State Journal.—*Souvenir Edition;* [Includes descriptions of various mining districts].—Reno; July28,1912; 96 pp.; 50c.

Rhodesia Chamber of Mines, Incorp.— *Report for the Year Ended Dec.* 31, 1911.— Bulawayo, 1912; 17 pp.; 50c. Abstract in S. Afr. Engg., May,1912; p. 83; 2000 w; 35c.

———. *Bonanza Copper Mine, Alaska.* —B. C. Mng. & Engg. Record, July,1912; p. 369; 600 w; 35c.

———. *What the Lake Superior Mining Region has Produced;* [Its part in *Mining Region has Produced;* [Its part in the development of the modern iron, copper and electrical industries, with output and values for each range, annually, 1845-1912]. —Mining & Engg. World, Aug.24,1912; p. 323-328; 2000 w; tables; 10c.

———. *Cornish Tin Mining;* [History of tin and copper production, Dolcoath mine.] —Canadian Mng. Jnl., Aug.1,1912; p. 521; 1000 w; 25c.

———. *Copper Producers and the Price of Copper;* [General market review of Spanish, S. African and Australasian mines].— Mng. World (London), Sept.28,1912; p. 373; 2000 w; 35c.

———. *Copper Production and Consumption;* [9 months' figures for U. S.].—E. & M. J., Oct.19, p. 724; 400 w; tables; 25c.

———. *Die russische Kupferindustrie.* [The Russian copper industry].—Bergwerks- Ztg., Nov.15,1912; p. 1; 800 w; 25c.

———. *Greene-Cananea Costs.*—E. & M. J., July20,1912; p. 114; 750 w; 25c.

———. *Greene Consol. Copper Co.;* [Abstract of report for 1911].—E. & M. J., June22,1912; p. 1217; 1100 w; 25c.

———. *Hidden Creek Mines, Observatory Inlet, B. C.*—Pacific Mng. Jnl., Nov., 1912; p. 81; 1000 w*; 25c.

———. *Japanese Copper Production;* [Summary of 1911 statistics].—M. & S. P., June22,1912; p. 865; 200 w; table; 20c.

———. *Mine and Mill Production, Germany,* 1909-1910.—See under Lead.

———. *Mines of Mitsu Bishi Goshi-Kwaisha, Japan;* [Describes the properties of the Mitsu Bishi Co., owning 21 metal and coal mines].—Mg. & Eng. World, Nov. 23,1912; p. 941; 5000 w*; 10c.

———. *Mines and Mining in Japan.*—Japan Yearbook, 1912; pp. 318-332.

———. *Mines of the Yerington District, Nevada.*—M. & S. P., Aug.10,1912; p. 177; 1800 w*; 20c.

———. *Mineral Production of the U. S. in* 1911. (U. S. Geol. Surv. publication).—Mg. & Eng. World, Dec.14,1912; p. 1007; 500 w; 10c.

———. *Mining in Alaska;* [Recent developments].—B. C. Mng. & Engg. Record, July,1912; p. 372; 3600 w; 35c.

———. *Mt. Morgan, Queensland.*—Mng. Mag., Sept.,1912; p. 174; 1000 w; 35c.

———. *Mount Morgan;* [Analysis of 1908-1912 reports]. — Australian Mng. Standd., July11,1912; p. 29; July18, p. 53; 5000 w; 50c.

———. *Old Dominion Co.;* [Abstract of 1911 report; Globe district, Ariz.].—E. & M. J., June22,1912; p. 1230; 750 w; 25c.

———. *Operations of the Chino Copper Co.;* [General manager's report; abstract].—Mg. & Eng. World, Nov.23,1912; p. 958; 1100 w; 10c.

———. *Queensland.* 1911.—Mng. Jnl., Aug.3,1912; p. 767; 2000 w; 35c.

———. *The Hampden Cloncurry Copper Mines, Ltd., North Queensland;* [Describes mines, equipment and operation].—Mng. & Engg. Rev., Oct.,1912; p. 5; 2100 w*; 35c.

———. *The Mining Industry of Katanga.*—S. Afr. Mng. Jnl., Oct.12, p. 179; 1000 w; 35c.

———. *Yerington District, Nevada.*—E. & M. J., July6,1912; p. 29; 1000 w; 25c.

Milling, Smelting, Refining, Etc.

Allen and Bishop.—*Exact Estimation of Sulphur in Pyritic Ores.*—See Sulphur.

Ashcroft, J. W.—*The Flotation Process; as Applied to the Concentration of Copper Ore at the Kyloe Copper Mine, N. S. Wales.*—Instn. of Mng. & Met'gy, Bull. 97, Oct., 1912; 23 pp*; 65c.

Ashcroft, J. W.—*Flotation Process at Kyloe, N. S. W.* (Bull. 97, Inst. Mg. & Met.; abstract).—E. & M. J., Dec.7,1912; p. 1085; 5000 w*; 25c. Also in Can. Mg. Jnl:. Dec.1.1912; p. 797; 5000 w*; 30c.

Austin, W. L.—*Leaching Applied to Copper Ore;* 23: *Sulphatizing of Cupriferous Material by Roasting.*—Mines & Methods, Oct.,1912; p. 29; 2500 w; 25c.

Austin, W. L.—*Leaching Applied to Copper Ore; XX: Cost of Electrolytic Extraction of Copper from Its Ore.*—Mines & Methods, July,1912; p. 531; August, p. —; 8000 w; 30c.

Austin, W. L.—*Leaching Applied to Copper Ore;* 22: *Roasting Preparatory to Lixiviation.*—Mines & Methods, Sept.,1912; p. 9; 3600 w; 25c.

Bahney, L. W.—*Application of the Alundum Extraction Thimble to the Determination of Copper.*—Met. & Cheml. Engg., Nov., 1912; p. 737; 600 w*; 35c.

Bahney, L. W.—*The Alundum Extraction-Thimble Used in the Determination of Copper.*—Amer. Inst. Mng. Engrs., Bull. 71, Nov.,1912; p. 1343; 500 w*; $1.15.

Bellinger, H. C.—*Presidential Address, Australasian Institute of Mining Engineers;* [Chiefly on metallurgy of lead and copper; action of alumina in slags].—Mng. & Engg. Rev., June,1912; p. 374; 2500 w; 45c. Also in Australian Mng. Standd., June6, p. 529; 3000 w; 35c.

Bennetts, B. H.—*Smelting Plants for Individual Mines.*—Pacific Mng. Jnl., Nov., 1912; p. 82; 1400 w*; 30c.

Borchers.—*Metallurgic Progress, Aachen,* 1902-1912; [in German].—See Aluminum.

Browne, D. H.—*The Iron Ratio for Copper-Converter Cost Comparisons.*—E. & M. J., Nov.2, p. 842; 600 w; 25c.

Carlyle, E. J.—*Copper Smelting at Kyshtim;* [Pyritic smelting in the Urals].—E. & M. J., June22,1912; p. 1231; 4000 w*; 25c.

Chase, Thorington.—*The World's Greatest Smelter.* (Description of the Washoe plant, Montana).—Mex. Mg. Jnl., Dec., 1912; p. 30; 6000 w; 25c.

Chauvenet, R.—*Chemical Arithmetic and Calculation of Furnace Charges.*—Philadelphia, 1912; 302 pp.; $4 (book).

Christensen, C. C.—*A Small Electrolytic Copper-Refining Plant;* [Equipment, power requirements, operation].—Mining & Engg. World, Sept.21,1912; p. 532; 1000 w; 10c.

Clamer, G. H.—*Electric Melting of Copper and Brass.*—Am. Inst. of Metals; paper; 2 p; 20c.

Cottrell, F. G.—*Electrical Fume Precipitation;* [at power plants, cement mills, lead and copper smelters].—Amer. Inst. Mng. Engrs., Bull. 67, July,1912; pp. 667-680*; $1.15.

Dayton, S. P.—*Rio Tinto Pyrites;* [Recovery of copper from cinders].—E. & M. J., Aug.17,1912; p. 293; 300 w; 20c.

Desoller, T. C.—*Rock-House Practice of the Quincy Mining Co.;* [Milling native copper; read to Lake Superior Mng. Inst.; abstract].—Mining & Engg. World, Sept.21, 1912; p. 529; 1800 w*; 10c.

Dwight, A. S.—*The Dwight-Lloyd Process of Roasting and Sintering;* [Read to Internatnl. Congr. of Appl. Chem'y; abstract].—Met. & Cheml. Engg., Sept.12, 1912; p. 595; 1500 w; 35c. Also abstracted in E. & M. J., Sept.14, p. 486; 600 w; 25c.

Emrich, H. H.—*The Refining of Blister Copper;* [Fire refining and electrolytic].—Amer. Inst. Mng. Engrs., Bull. 66, June, 1912; pp. 611-632; $1.15.

Fairlie, A. M., and A. J. Bone.—*Copper Determination with Revolving Anodes;* [Priority of discovery].—E. & M. J., Aug. 31,1912; p. 389; 500 w; 25c.

Feld, W.—*Centrifugal Gas Washer;* [For purifying blast-furnace gas; recovering metal dust from lead and copper smeltery gases, etc.].—Met. & Cheml. Engg., July, 1912; p. 436; 2000 w*; 35c.

Fink, Edward.—*Flat Smelting Furnace for Copper, Lead and Zinc;* [Direct bessemerization of sulphide, zinckiferous ores].—Mining & Engg. World, Nov.2, p. 797; 3800 w*; 10c.

Fischer, F. and E. Stecher.—*Schnellelektroanalyse unter vermindertem Druck;* [Rapid electro-analysis at reduced pressure; lead, nickel, zinc, copper in brass; copper-nickel and copper-silver separation].—Zts. f. Elektrochemie, Sept.15,1912; pp. 809-816*; 50c.

Fleck, A.—*Beiträge zur Geschichte des Kupfers;* [History of copper, with special reference to production and technical preparation].—Jena,1912; 60 pp.; $1; (book).

Gadomsky, A. — *Gadomsky's Copper Leaching Process;* [U. S. Pat. 1,014,868].—E. & M. J., Nov.2, p. 842; 300 w*; 25c.

Greenawalt, Wm. E.—*The Hydrometallurgy of Copper; I: Roasting; II: Hydrometallurgical Process.*—N. Y. and London; 1912; 504 pp; 112 figs; $5 (book).

Guess, G. A.—*Oxygen Efficiency of the Pyritic Furnace.*—E. & M. J., Nov.16, p. 925; 700 w; 25c.

Hahn, O.—*Electric Smelting of Arsenical Copper Ore;* [Abstract and transl. from Metallurgie, Vol. 8, No. 19].—E. & M. J., Sept.14,1912; p. 504; 500 w; 25c.

Hallett, R. L.—*Separation in the Iodide Method for Determining Copper.*—E. & M. J., July13,1912; p. 54; 400 w; 25c.

Hallett, R. L.—*The Iodide Copper Assay.*—E. & M. J., Sept.28,1912; p. 580; 750 w; 25c.

Handy, J. O.—*Electrolytic Deposition of Copper from Sulphide Ores;* [Read to Internatnl. Congr. of Appl. Chem'y; abstract].—Met. & Cheml. Engg., Sept.12, 1912; p. 604; 200 w; 35c. Also in E. & M. J., Sept.14, p. 487; 500 w; 25c.

Hansen, C. A.—*Electric Smelting of Copper and Brass.*—Amer. Inst. of Metals, Paper No. 11, Sept.,1912; 20 pp*; 50c.

Hasegawa, T.—*Electrolytic Copper Refining at the Nikko Copper Works.*—M. & S. P., Oct.12, p. 465; 600 w*; 20c.

Herwegen, L.—*Die Schwimmverfahren;* [Flotation processes].—See Zinc.

Heyn, E.—*Metallography,* 1909-1911.—See under Metallurgy.

Hodge, W. R.—*The Ahmeek Mill, Hubbell, Mich.*—E. & M. J., Oct.19, p. 749; 2800 w*; 25c.

Holder, Chas. A.—*Electrolytic Extraction of Copper Ore in Norway.* (U. S. Consular report; abstract).—Mg. & Eng. World, Dec.14,1912; p. 1088; 260 w; 10c.

Holder, C. A.—*Electrolytic Copper Leaching in Norway.*—U. S. Consul. Rep., Nov.5, p. 654; 200 w; 20c.

Hollway, J.—*Treating Sulphides in the Bessemer Converter;* [Republication of some experiments in 1878, on pyritic smelting].—M. & S. P., Nov.2, p. 557; 5000 w*; 20c.

Holtmann, —. *Leuschner Flotation Process.*—See under Zinc.

Jacquier, G.—*Photolyse, a New Automatic Process for the Extraction of Metals;* [Precipitation on aluminum plates from warm water solutions].—S. Afr. Mng. Jnl., Sept. 14, p. 45; 800 w*; 35c.

Juschkewitsch, N.—*Zur Theorie des Kupfersteinschmelzprocesses;* [Theory of smelting copper matte].—Metallurgie, Sept.8, 1912; pp. 543-558; 10,000 w*; 45c.

Keller, H. A.—*Basic Copper Converting.*—E. & M. J., Nov.2, p. 822; 300 w; 25c.

Knudsen, E.—*La Fusion de los Minerales de Cobre; Procedimiento Knudsen;* [The smelting of copper ores; Knudsen process] (abstract of paper read before the Austrian Decennial Congress of Mining Engineers).—Revista Minera, Dec.1,1912; p. 559; 1000 w; 35c.

Knudsen, E.—*Die technischen Verbesserungen und ökonomischen Resultate beim Kupferschmelzen, Prozess Knudsen;* [Technical improvements and economies in the Knudsen pyritic smelting of copper; read to Allgm. Bergmannstag, Vienna, 1912; abstract].—Montanist. Rundschau, Sept.1, 1912; p. 952; 1000 w; 50c.

Kothuy, —. *Recherches sur la marche du procédé de grillage chlorurant des cendres de pyrite;* [Succession of the reactions in chloride roasting of pyritic cinders; from Metallurgie, 1911, No. 13, pp. 389-399; French abstract].—Rev. de Métal'gie, June, 1912; p. 311; 1200 w*; $1.15.

Laist, Frederick.—*Chemistry of the Anaconda Reduction Processes;* [Paper read before Int. Cong. Appl. Chem.; abstract].—E. & M. J., Nov.30,1912; 1500 w; p. 1036; 25c.

Laist, F.—*Chemistry of the Reduction Processes in Use at Anaconda, Mont.;* [Read to Internatnl. Congr. of Appl. Chem'y; abstract].—Met. & Chemi. Engg., Sept. Suppl., 1912; p. 592; 500 w; 35c.

Lane, A. C.—*Mine Waters* [in Michigan copper country, and effect on ore deposition and concentration; from Mich. Geol. Surv. Rept. for 1909].—M. & S. P., Nov.9, p. 589; 2000 w; 20c.

Levy, D. M.—*Modern Copper Smelting.*—London,1912; pp. —; $3 (book).

Martin, A. H.—*Fighting Smelter Fumes in California.*—Mng. Jnl., Aug.31,1912; p. 870; 1200 w; 35c.

Mathewson, E. P.—*Development of the Reverberatory Furnace for Smelting Copper Ores;* [Anaconda plant, Mont.; Steptoe works, Nev.; read to Internatnl. Congr. of Appl. Chem'y; abstract].—Met. & Cheml. Engg., Sept. Suppl.; 1912; p. 591; 750 w; 35c.

McMurtry, G. C.—*Collection of Precious Metals as Speiss in the Smelting of Antimonial Concentrates;* [Recovery of gold from copper concentrates or matte].—Instn. of Mng. & Met'gy, Bull. 97; Oct.,1912; 8 pp; 65c.

Mercer, H. T.—*Rock House Practice at Copper Range Properties;* [Read to Lake Superior Mng. Inst.; abstract].—Mich. College of Mines "Alumnus," July,1912. Also in E. & M. J., Aug.24, p. 349; 1200 w; 25c. Also in Met. & Cheml. Engg., Oct.,1912; p. 680; 1600 w*; 35c.

Meuskens, Cl.—*Flotation Process of Minerals Separation, Ltd.* [in German].—See Zinc.

Moser, L.—*Die Titration von Kupfersalzen mit Titantrichlorid;* [Titration of copper salts with titanium trichloride].—Chemiker Ztg., Sept.28, p. 1126; 1000 w; 35c.

Mostowitsch, Wl.—*Die Berechnung der Beschickung für Kupfersteinschmelzen im Schachtofen;* [Computing the charge of copper matte in the blast furnace].—Metallurgie, Sept.8,1912; pp. 559-568; Sept.22; pp. —; 75c.

Neumann, B.—*Das Metallhüttenwesen im Jahre* 1911; [Review of metallurgy in 1911; 1: Copper].—Glückauf, Sept.21,1912; pp. 1529-1536; 50c.

Parry, L.—*Treatment of Metal Wastes.*—See under Antimony.

Platou, —. *Die Apparat von Franz Fischer zur elektrolytischen Schnellbestimmung von Kupfer mit der Netzelektrode;* [Franz Fischer apparatus for rapid electrolytic estimation of copper with the net-electrode; read to Polyteknisk Fören., Kristiania, March18,1912; very brief mention in] Chemiker Ztg., June8,1912; p. 649; 150 w; 30c.

Poupin, A.—*Trap Spout for Copper Blast Furnace.*—E. & M. J., Oct.26, p. 785; 600 w*; 25c.

Probert, F. H.—*Copper Determination with Revolving Anodes;* [Equipment and practice at Ray Central Copper Co., Ariz.].—E. & M. J., Aug.17,1912; p. 315; 1000 w*; 25c.

Reed, T. T.—*The Mason Valley Copper Smelter.*—M. & S. P., Aug.31,1912; p. 267; 2000 w*; 20c.

Reichinstein, D.—*Quantitätive Untersuchungen über den Einfluss des Säuregehaltes des Elektrolyten auf die chemische Polarisa-*

tion der umkehrbaren Elektrode Cu/Cu · ·; [Tests on the influence of acidity of the electrolyte on the chemical polarization of the reversible electrodes Cu/Cu · ·].—Zts. f. Elektrochemie, Oct.1, p. 850; 8000 w*; 45c.

Robertson, W. F.—*Experiments in Oil-Smelting in Br. Columbia;* [Boundary district, copper at Van Anda furnace].—Met. & Cheml. Engg., Sept.,1912; p. 543; 800 w*; 35c.

Saunders, G. J.—*Metallurgical Treatment at Mt. Morgan, Queensland;* [Oxidized, mundic and copper-gold ores; roasting, smelting, acid plant, chlorination].—Sydney Univ. Engg. Soc., Jnl., Vol. 16 (for 1911-12); pp. 25-60*; $2.

Schneider, G. W.—*Concentration at the Butte and Superior Mill;* [From "Rocky Mountain News"].—M. & S. P., June29, 1912; p. 893; 500 w; 20c. Also in Mines & Minerals, Oct., p. 160; 1000 w; 35c.

Slade, R. E. and F. D. Farrow.—*Bemerkung über den Schmelzpunkt von Kupferoxyd;* [Notes on the smelting point of copper oxide, CuO].—Zts. f. Elektrochemie, Sept.15,1912; p. 817; 1000 w; 45c.

Smoot, A. M.—*The Mathematics of Copper Sampling.*—E. & M. J., June22,1912; p. 1213; 1200 w; 25c.

Smout, A. J. G.—*Iodide Copper Assay.*—E. & M. J., Aug.31,1912; p. 390; 800 w; 25c.

Stahl, W.—*Ueber Entfernung resp. Verschlackung der Beimengungen des Kupfers im Kupferraffinierbetrieb;* [The nature of silicate slags in copper smelting and refining at temperatures of 1200 to 1450° C.].—Metallurgie, June8,1912; pp. 362-367; June 22, p. —; $1.

Stephan, —. *Einiges über die Erzeugung von Metallen im elektrischen Ofen;* [Electric furnaces, with special reference to Stephan's work on reduction of Belgian Congo copper ores in the Girod furnace; read to Ges. Deu. Metallhütten & Bergleute; abstract].—Deu. Bergwerks, Ztg., Oct.1,1912; p. 1; 750 w; 35c.

Styri, H.—*Basisches Verschmelzen von Kupferstein;* [Basic converting of copper matte].—Metallurgie, July8,1912; p. 426-431; July22, p. —; 7000 w; 75c.

Sugiura, K. and P. A. Kober.—*Iodometric Copper Titrations;* [Abstract from Amer. Cheml. Soc., Jnl.].—Cheml. Engr., Sept., 1912; p. 123; 1000 w; 35c.

Tye, A. T.—*Comparative Method of Screen Analysis;* [System at Cananea Cons. Copper Co. mill].—M. & S. P., Sept. 14,1912; p. 339; 2000 w; 20c.

Wagner, P. A.—*Mining and Ore Treatment at Tsumeb (Otavi) in German S. W. Africa;* [Copper-lead ores and smelting].—S. Afr. Mng. Jnl., Anniversary No., Sept., 1912; p. 323; 1700 w; $1.

Wedge, U.—*The Sulphatizing Roasting of Copper Ores and Concentrates;* [Read to Internatnl. Congr. of Appl. Chem'y; abstract].—Met. & Cheml. Engg., Sept. Suppl.; 1912; p. 593; 1000 w; 35c.

Weintraub, E.—*Progress of Work on Boronized Copper;* [Use of boron suboxide flux as de-oxidizer].—Amer. Inst. of Metals, Paper No. 14, Sept.,1912; 8 pp*; 1500 w; 50c.

Wentworth.—*Electrostatic Concentration; Huff Processes.*—See under Zinc.

Westling.—*Rankin Nitric Acid Process for Sulphide Ores.*—See under Lead.

Wood.—*Flotation Process.*—See Molybdenum.

Wright, E. T.—*Concentration with Woodbury Classifier and Jigs;* [Use on Lake Superior copper ores].—E. & M. J., Sept.28, 1912; p. 608; 1000 w*; 25c. Also in Mining & Engg. World, Sept.28, p. 575; 1500 w*; 10c.

Youchékvitch, N.—*La théorie de la fusion des minerais de cuivre;* [The theory of copper smelting; experiments with copper and pyrite ores in roasting and smelting furnaces at temperatures below melting].—Soc. Russe de Métallurgie, Rev., 1911, pp. 489-514; $2. Abstract in French in Rev. de Mét'gie, June,1912; p. 308; 1000 w*; $1.15.

———. *Australasian Institute of Mining Engineers; New South Wales Trip,* 1912; [Gt. Cobar and Mt. Boppy mines, mills and smelters; Port Kembla and Cockle Creek smelters and electrolytic refineries].—Australian Mng. Standd., June20,1912; p. 581; 1500 w; 35c.

———. *Copper Blast Furnace Settlers.*—E. & M. J., Oct.12, p. 689; 400 w; 25c.

———. *Development of Converter Practice.*—M. & S. P., Nov.2, p. 552; 1800 w; 20c.

———. *Milling at the Butte and Superior.*—M. & S. P., June29,1912; p. 893; 500 w; 20c.

———. *New Dust Catching System;* [at Cerro de Pasco smelter].—Mex. Mng. Jnl., July,1912; p. 43; 1000 w; 35c.

———. *Notable Tendencies in the Best Milling Practice;* [Rough concentration followed by cleaning machines; classification immediately after crushing].—Mining & Engg. World, Oct.12, p. 701; 600 w; 10c.

———. *Present Smelting Rates in Utah.* E. & M. J., July20,1912; p. 125; 1500 w; 25c.

———. *Recent Copper Milling Practice at Lake Superior.*—Met. & Chem. Eng., Dec., 1912; p. 795; 6000 w*; 35c.

———. *The Bradley Process;* [Chloride roasting and chlorination to recover copper, gold and silver from waste slimes at Washoe, Montana].—M. & S. P., June15, 1912; p. 822; 750 w; 20c.

———. *The Miami Concentrator.*—M. & S. P., Nov.9, p. 600; 1000 w*; 20c.

———. *Treatment of California Zinc-Copper Ores.*—Met. & Cheml. Engg., Sept., 1912; p. 564; 600 w; 35c.

———. *Usine d'affinage du cuivre de la Soc. Métallurgique de Livourne;* [The Livourne electrolytic refinery].—Rev. d' Electrochimie, June,1912; p. 179; 1000 w; 35c.

———. *Wet Methods of Copper Extraction;* [Review of possibilities].—M. & S. P., Sept.21,1912; p. 360; 1200 w; 20c.

Geology.

Boden, K.—*Das Kupfererzvorkommen im untern Glindetale bei Niedermarsberg in Westfalen;* [The copper ore deposits of the lower Glinde valley, Westphalia].—Glückauf, June15,1912; pp. 937-947*; June22, p. 981-988*; 80c.

Butler, B. S.—*Geological Classification of Copper Deposits;* [From U. S. Geol. Survey, Mineral Resources for 1911].—Mining & Engg. World, Oct.26, p. 765; 2600 w; 10c.

Carter, E. H.—*Whiskey Lake Area;* [Ontario].—Canadian Mng. Jnl., July15, 1912; p. 483; 2000 w*; 25c.

Dahms.—*Ores in Acidic Rocks, German S. W. Africa;* [in German]. See Tin.

Dalton.—*Geology of Venezuela.*—See under Petroleum.

Deguchi, Y.—*The Enargite Deposit in Taiwan.*—Geol. Soc. of Tokyo, Jnl.; 1912; Vol. 19, pp. 13-15.

Hardman, J. E.—*The Copper Deposits of Eastern Quebec.*—Canadian Mng. Jnl., July1,1912; p. 462; 1800 w; 25c.

Harvie, Rob.—*Geology of Orford Map Area, Quebec; Southern Portion of Serpentine Belt;* [Chiefly copper].—Canada Geol. Survey, Rep. f. 1911; 1912; pp. 286-293.

Hore, R. E.—*Origin of the Sudbury Nickel and Copper Deposits.*—Mining & Engg. World, June29,1912; p. 1345; 4800 w*; 10c.

Kuntz, —. *Geologische Verhältnisse des Kaokofeldes;* [Geology of the Kaoko-Otavi region, German SW. Africa; read to Deu. Geol. Ges.; brief abstract].—Glückauf, July 27,1912; p. 1214; 300 w; 45c.

Lane, A. C.—*The Keweenaw Series of Michigan;* [Exhaustive monograph of geology of the copper rocks, with comparisons with New Jersey, Bolivia and Oberstein, Germany; Appendix, *The Development of the Copper Mines of Lake Superior and Their Geological Relations,* by A. H. Meuchs; pp. 887-931].—Mich. Geol. Survey; Publication No. 6; 2 volumes and atlas; 1912; 983 pp.*.

Lazarevic, M. — *Die Enargit-Covellin-Lagerstätte von Cuka-Dulkan bei Bor in Ostserbien;* [The enargite-covellite deposits at Cuka-Dulkan near Bor, East Servia].—Zts. f. prakt. Geologie, Sept.,1912; pp. 337-370*; 75c.

Lee, M. L.—*Geological Study of the Elisa Mine, Cananea, Mex.*—Econ. Geol'y, June, 1912; pp. 324-339*; 75c.

LeRoy, O. E.—*Geology and Ore Deposits of Phoenix, Boundary District, B. C.*—Canada Dept. Mines, Geol. Survey Memoir No. 21; 1912; 110 pp*; 50c.

LeRoy, O. E.—*Geology of Nelson Map Area, B. C.*—Canada Geol. Survey, Rep. f. 1911; 1912; pp. 139-158*.

Loveman, M. H.—*Geology of the Miami Copper Mine.*—M. & S. P., Aug.3,1912; p. 147; 2200 w*; 20c.

McConnell, R. G.—*Reports on Observatory Inlet, Salmon River District, and Portland Canal Districts, B. C.*—Canada Geol. Survey, Rep. f. 1911; 1912; pp. 41-70*.

Moffit, F. H.—*Lower Copper River Basin, Alaska; Taral and Bremner Districts; Chitina District.*—U. S. Geol. Survey, Bull. 520-C; 1912; 19 pp.*; 10c.

Moffit, F. H.—*Headwater Regions of Gulkana and Susitna Rivers, Alaska; with Accounts of the Valdez Creek and Chistochina Placer Districts.*—U. S. Geol. Surv., Bull. 498; 82 pp.*; 10c.

Paige, S.—*The Geological and Structural Relations at Santa Rita (Chino), New Mexico.*—Economic Geol'y, Sept.,1912; pp. 547-559*; 65c.

Probert, F. H.—*Copper Butte, Ariz., a Volcanic Throat.*—E. & M. J., Sept.14,1912; p. 499; 1200 w*; 25c.

Roberts, M.—*Prince of Wales Island, Alaska;* [Silver and cupriferous magnetite].—B. C. Mng. & Engg. Record, July,1912; p. 370; 500 w; 35c.

Sales, R. H.—*Review of Butte Geological Report;* [Weed's].—E. & M. J., Oct.19, p. 729; 4200 w; 25c.

Spurr, G. E., G. H. Garrey and C. N. Fenner.—*Study of a Contact Metamorphic Ore Deposit; Dolores Mine, Matehuala, S. L. P., Mex.;* [Cupriferous pyrite].—Econ. Geol'y, Aug.,1912; p. 444-484*; 65c.

Statz, B. A.—*The New Placer Mining District;* [Golden and San Pedro, Santa Fé counties, N. Mex.; also copper].—Mng. Sci., Sept.12,1912; p. 167; 1100 w; 20c.

Statz, A.—*Hell Canyon Mining District, N. Mex.;* [15 miles s. e. of Albuquerque].—Mng. Sci., Sept.26,1912; p. 201; 1000 w; 20c.

Strauss, L. W.—*The Coro-Coro, Bolivia, Copper Deposits.*—Economic Geol'y, Sept., p. 592; 300 w; 65c; also in Mng. Mag., Sept.,1912; p. 207; 4000 w*; 45c.

Turner, H. W.—*Gossan Outcrops of Cupriferous Pyrite.*—Mng. Mag., Nov.,1912; p. 357; 3200 w*; 45c.

Turner, H. W.—*Copper Mines of the Ural Region;* [Describes ores and ore-bodies].—Mng. Mag., June,1912; pp. 442-451*; 45c.

Umpleby.—*Ore Deposits of Loon Creek District, Idaho.*—See under Gold.

Van Horn, F. R.—*The Occurrence of Silver, Copper and Lead-Ores at the Veta Rica Mine, Sierra Mojada, Coahuila, Mex.;* [Geology and genesis].—Amer. Inst. Mng. Engrs., Bull. 68, Aug.,1912; pp. 867-882*; $1.15.

Walther, Dr. Karl.—*Zur Geologie der Gegend von Seibal und ihres Kupfererzlagerstätten im Staate Rio Grande do Sul;* [Concerning the geology of the region of Seibal, state of Rio Grande do Sul (Brazil), and its deposits of copper ore].—Zts. für praktische Geologie, Oct.,1912, p. 404; 7000 w*; 75c.

Weaver, C. E.—*Geology and Copper Ore Deposits of the Index Mining District, Washington.*—Washington Geol. Survey, Bull. No. 7; 1912; 91 pp*; 75c.

Weed, W. H.—*Geology and Ore Deposits of the Butte District, Montana.*—U. S. Geol. Survey, Prof. Paper No. 74; 1912; 262 pp.*; 50c.

Weed, W. H.—*Is Geology a Success as a Guide to Ore Deposits?* [Bisbee, Ariz., and inadequacy of geology in predicting irregular ore-bodies and ore reserves].—Mining & Engg. World, Aug.10,1912; p. 245; 2400 w; 10c. Reprinted in Mines & Methods, Aug., p. 559; 2400 w; 20c.

Weed, W. H.—*History and Development of Butte, Mont.;* [From U. S. Geol. Survey Prof. Paper No. 74].—Mining & Engg. World, Aug.24,1912; p. 329; 3300 w; 10c.

Weed, W. H.—*Source of Copper in the Ores at Butte, Mont.;* [From U. S. Geol. Survey Prof. Paper No. 74].—Mining & Engg. World, Aug.31,1912; p. 388; 3200 w; 10c.

Wendeborn, B. A.—*Die Kupfererz- und Limonit-Lagerstätten von Majdan-Pek in Serbien;* [The copper-bearing quartz-andesite dike and buried residual limonite deposits of Majdan-Pek, Servia].—Zts. f. prakt. Geologie, July,1912; p. 276-280*; 75c.

Wencker, H.—*Die wirtschaftliche Bedeutung der Kupfererzlagerstätten der Welt;* [Classification of the world's copper resources by geologic types of deposits].—Bergwirtsch. Mittlngn., Aug.,1912; p. 137-140*; 75c.

Weston.—*Mogollon District.*—See under Gold.

Wilson, A. W. G.—*History of Copper Locations, East Shores of Lake Superior;* [From Canada Dept. Mines, Mines Branch, Bull. No. 6].—Mining & Engg. World, Oct. 26, p. 769; 900 w; 10c.

Winchell, H. V.—*The St. Helen's Mining District;* [Tourmaline-bearing cupriferous

veins in southwestern Washington].—Amer. Inst. of Mng. Engrs., Bull. 70, Oct.,1912; pp. 1037-1045*; $1.15.

———. *Katanga Copper Deposits;* [Recent developments].—E. & M. J., Sept.14, 1912; p. 512; 500 w; 25c.

———. *Les mines de cuivre;* [Copper deposits and copper mining; vein and porphyry deposits].—Soc. Amicale Ecole Douai, Bull.; July25,1912; pp. 517-520; Aug.10; pp. —; 1500 w; 75c.

———. *Mining in Northern Rhodesia;* [Copper of northwest Rhodesia].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 303; 1000 w*; $1.

———. *Minerals in the Arctic;* [Coal, copper, lead].—Mng. Jnl., Oct.5,1912; p. 987; 1500 w; 35c.

———. *Ore Deposits Around Vancouver;* [Chiefly copper and molybdenite].—B. C. Mng. & Engg. Record, April,1912; p. 262; 1600 w; 35c.

———. *Stanthorpe District, Queensland.* —See under Tin.

———. *The Copper Fields of Katanga.* —S. Afr. Mng. Jnl., Anniversary No., Sept., 1912; p. 306; 2700 w*; $1.

———. *The Great Copper Fields of Katanga.*—S. Afr. Mng. Jnl., June8,1912; p. 551; 2500 w; 35c.

———. *The Minerals of the Murchison Range and District;* [from memoir of Transvaal Geol. Survey].—S. Afr. Mng. Jnl., June15,1912; p. 581; June22, p. 619; June29, p. 655; July6, p.—; 8000 w; 80c.

Miscellaneous.

Baucke, H.—*On Some Recent Micrographical Investigations of Copper.*—Internatnl. Asso. f. Testg. Materials, Vol. II, No. 11; 1912; 13 pp*; 95c.

Baucke, H.—*Behavior of Copper under the Impact Bending Test on Nicked Bars.* —Internatnl. Asso. for Testing Materials, Bull. 9, June,1912; 13 pp*; 90c.

Coates, M. C.—*Overhead Conductors, Copper vs. Aluminum.*—Australian Mng. Standd., Sept.26, p. 306; 800 w; 35c.

Döring, Th.—*Fortschritte auf dem Gebiete der Metallanalyse im Jahre,* 1911; [Progress in metal analysis in 1911; (1), copper; silver-gold; zinc].—Chemiker Ztg., June18,1912; p. 681; 2000 w; 35c.

Franck, C.—*Kompounddraht aus Eisen und Kupfer;* [Copper-clad iron wire].—Centralbl. d. Hütten & Walzwerke, Aug.25, 1912; p. 451; 700 w; 35c.

Goodrich, H. C.—*Difficult Work on a Mining Railroad in Utah;* [Construction of Bingham & Garfield Ry.].—Engg. Record, Aug.17, p. 184; 2100 w*; 20c.

Grard, C.—*Industrial Application of Microscopic Metallography for Controlling the Work Put on Copper and Brasses.*—Internatnl. Asso. f. Testg. Materials, Vol. II, No. 11; 1912; 13 pp*; 95c.

Guillet, L.—*General Principles for the Specifications for Copper.* — Internatnl. Asso. f. Testg. Materials, Vol. II, No. 11; 1912; 8 pp; 95c.

Houben, —. *Solubility of Oxides and Sulphides in Molten Salt;* [In German].—See Zinc.

Hübener, Dr.—*Geschichte und Organisation der Berliner Kupferbörse;* [History and organization of the Berlin copper exchange]. —Bergwirtsch. Mittlngn., May,1912; pp. 82-86; 4000 w; 75c.

Huntingdon, A. K.—*The Effect of Temperatures Higher than Atmospheric on Tensile Tests of Copper and its Alloys, and a Comparison with Wrought Iron and Steel;* [Read to Inst. of Metals].—Engnrg., Sept. 27,1912; p. 437; (paper); p. 434 (discussion); 3000 w*; 35c.

Johnson, F.—*The Influences of Impurities in "Tough-Pitch" Copper;* [Read to Inst. of Metals; abstract].—Iron & Coal Trades Rev., Sept.27; p. 456; 500 w; 35c.

Keller, Edw.—*The Solubility in Nitric Acid of Gold Contained in Certain Copper-Alloys—Copper Bullions.*—Amer. Inst. Mng. Engrs., Bull. 67; July,1912; pp. 681-695; $1.15.

Lewis, Er. A.—*Disadvantages of the New American Standard Copper Specifications.*—Met. & Cheml. Engg., Sept.,1912; p. 540; 4500 w; 35c.

Liddell, D. M.—*Muffel Annealing Furnace for Copper Wire.*—E. & M. J., Nov.2, p. 834; 500 w*; 25c.

Masselon, E.—*Fabrication des tiges et fils de cuivre;* [The manufacture of copper rods and wire].—Métallurgie, June12,1912; p. —; June19, p. 387; 1500 w; 50c.

Paine, H. H.—*The Coagulation of Colloidal Copper;* [Abstract from Cambridge Philos. Soc., Proc.; 1911; p. 452].—Cheml. Met. & Mng. Soc. of S. Afr., Jnl.; May, 1912; p. 483; 1200 w; 90c.

Rebeyrol.—*World's Metal Markets in* 1910; [in French].—See Nickel.

Schoch and Brown.—*Electroanalysis with Acidified Chlorid Electrodes.*—See Antimony.

Stahl, W.—*Dichte und Qualitätswerte der mit geringen Zinnmengen versetzten Raffinadkupfer;* [Influence of small amounts of tin on refined copper].—Centralbl. d. Hütten & Walzwerke, Oct.15, p. 542; 500 w; 35c.

Stahl, W.—*Ueber Warzen, Pocken, Blasen oder Blattern auf gewalztem Kupfer;* [Warts, spots, blow-holes and scale on rolled copper].—Metallurgie, July8,1912; p. 418; 500 w; 50c.

Thompson, M. de K.—*Simultaneous Electrolytic Deposition of Copper and Zinc from Various Solutions Not Containing Cyanide;* [in brass plating].—Met. & Cheml. Engg., Aug.,1912; p. 458; 3800 w; 35c.

Thomson, R. D.—*Casting Pure Copper by the Use of Boron Suboxide.*—Castings, July, 1912; p. 109; 1000 w*; 25c. Also in Engg. News, July18, p. 105; 600 w; 25c.

Treadwell, W. D.—*Ueber die elektroanalytische Bestimmung des Kupfers in Pyriten;* [Electroanalytic estimation of copper in pyrites].—Chemiker Ztg., Aug.24,1912; p. 961; 800 w; 35c.

Westby, —. *Smelter Smoke Conservation.*—See Thermic Metallurgy (Fumes, etc.).

Jas. Lewis & Sons.—*Foreign Consumption of Copper;* [in U. K., France, Germany, and rest of world, 1st 5 months 1910-11-12].—Mining & Engg. World, July 27,1912; p. 144; 300 w; 10c.

H. B. F.—*Alumina in Slags;* [Mexico state copper mattes].—E. & M. J., Oct.19, p. 728; 300 w; 25c.

"Mining Accountant."—*Australian Big Mines; Examinations of Their Reports; Wallaroo & Moonta Mng. & Smeltg. Co., Ltd.*—Australian Mng. Standd., Sept.19; p. 270; 2000 w; 35c.

———. *Aluminum-Kupferlegierung;* [Aluminum-copper alloys].—Giesserei Ztg., June15,1912; p. 388; 600 w; 35c.

———. *Copper Output,* 1912: [Reviews 26 leading American companies, output 1911 and first semester 1912, and earnings].—M. & S. P., July20,1912; p. 88; 500 w; tables; 20c.

———. *Copper Statistics;* [1st semester, 1912].—E. & M. J., July27,1912; p. 145; 1000 w; 25c.

———. *Cost of Producing Lake Superior Copper;* [1906-1910].—E. & M. J., Aug.17, 1912; p. 306; 600 w; 25c.

———. *Das Schweissen von Kupfer und Aluminum;* [The welding and rolling of copper and aluminum].—Eisen Ztg., Aug.3, 1912; p. 555; 1600 w; 35c.

———. *Der Handelsverkehr am Kupfermarkt;* [Methods of buying and selling copper in Europe and America].—Deu. Bergwerks Ztg., July25,1912; p. 1; July26, p. 1; July27, p. 1; 6000 w; 75c.

———. *London Copper Quotations for 49 Years;* [High and low quotations 1864-1912, yearly].—Mining & Engg. World, Aug. 3,1912; p. 194; 100 w; tables; 10c.

———. *Manufacture of Copper Clad Steel Products;* [Duplex Metals Co. process].—Iron Trade Rev., Sept.12,1912; p. 479; 2400 w*; 20c. Also in Iron Age, Sept. 12, p. 572; 2400 w*; 30c.

———. *Methods of Analysis Used in the Laboratories of Armour Institute of Technology;* [Idiometry and iodide assay of copper].—Cheml. Engr., June,1912; p. 253; 1500 w; 35c.

———. *Micrographical Studies;* [Includes rapid estimation of arsenic in red copper].—Internatnl. Asso. f. Testing Materials, Proc., Vol. 8, No. 2; 1912; pp. 11*; 60c.

———. *Mining in Mozambique Co.'s Territory;* [Chiefly gold and copper resources, regulations, and conditions; from the company's "Mining Handbook" for 1912].—S. Afr. Mng. Jnl., May18,1912; p. 428; May25, p. —; 5000 w; 35c.

———. *Notes on Granby Co. Matters.*—Canadian Mng. Jnl., Nov.15, p. 775; 1400 w; 25c.

———. *Our Big Mines; Examination of their Reports; Chillagoe Co., Ltd.*—Australian Mng. Standd., Aug.22,1912; p. 175; 2000 w; 35c.

———. *Precipitation of Copper from Mine Water at Butte.*—M. & S. P., Sept.28, 1912; p. 404; 700 w; 20c.

———. *The Position of the Cape Copper Companies.*—S. Afr. Mng. Jnl., Oct.19, p. 212; 500 w; 35c.

———. *The Position of Whim Well Copper;* [W. Australia].—Mng. World (London), June14,1912; p. 768; 800 w; 35c.

———. *The Value of Walker's Copper Predictions;* [Deprecates continual optimism].—Mining & Engg. World, Oct.5, 1912; p. 607; 1000 w; 10c.

———. *Unit Costs at Ohio Copper, Bingham, Utah.*—E. & M. J., Oct.12, p. 691; 800 w; 25c.

———. *Wolverine Costs, Mich.*—E. & M. J., Oct.26, p. 788; 500 w; 25c.

Brasses; Bronzes; Copper Alloys.

See under Alloys.

CHAPTER III.

Lead and Zinc.

LEAD.

Mines and Mining and Geology.

See also under "Paints and Pigments" (Non-Metals).

Allan, J. A.—*Geology of Field Map Area, B. C.;* [Lead-zinc-silver].—Canada Geol. Survey, Rep. f. 1911; 1912; pp. 175-187*.

Bancroft, J. A.—*Report on Keekeek Lake District.*—See under Gold.

Baumgärtel, B.—*Der Oberharzer Erzbergbau;* [Mining industry of the Upper Hartz, Prussia].—Clausthal, 1912; $1.25 (book).

Bell, R. N.—*The Lawrence Mine;* [Silver-lead, Clarksfork, Idaho].—N. W. Mng. News, Sept.,1912; p. 103; 1000 w; 25c.

Bordeaux. — *Vladivostok District.* — See Zinc.

Bornhardt, W.—*Die Erzvorkommen des Rheinischen Schiefergebirges;* [Geology of the commercial lead and zinc lodes of the Rhenish slate formations; read to Ges. Deu. Metallhütten & Bergleute].—Metall & Erz. Oct.8, p. 2-11; 8000 w*; 45c. Abstract in Deu. Bergwerks Ztg., Oct.1, p. 1; 750 w; 35c.

Boutwell, J. M.—*Geology and Ore Deposits of the Park City District, Utah.*—U. S. Geol. Survey, Prof. Paper No. 77; 231 pp.*; 20c.

Brown, C.—*North Arkansas Mining Field Looks Promising;* [Lead-zinc developments].—Mining & Engg. World, Sept.14, 1912; p. 490; 1200 w; 10c.

Butler, G. M.—*Some Recent Developments at Leadville; a Leadville Fissure Vein;* [New Monarch, Cleveland or Louerma vein, geology and its ores].—Econ. Geol'y, June, 1912; pp. 315-324*; 65c.

Clifford, Jas. O.—*Industrial Lead Poisoning.*—M. & S. P., July6,1912; p. 9; 3500 w; 20c.

Dunlop, J. P.—*Central States in* 1911; *Mine Production.*—See under Zinc.

Emmons and Larson.—*Geology and Ore Deposits of Creede, Colo.*—See Silver.

Fishback.—*Organ Mtns., N. Mex.*—See Copper.

Goodchild, W. H.—*Valuation of Base-Metal Mines.*—Mng. Mag., July,1912; p. 50; 2100 w; 45c.

Guardiola, R.—*Evolución minera en Cartagena;* [Evolution of the mining industry of Cartagena, Spain].—Cartagena,1912; 51 pp; $2 (book).

Hale, Fred A., Jr.—*The Yellow Pine Mining District, Nev.*—Mex. Mg. Jnl., Dec., 1912; p. 29; 2500 w*; 25c.

Harrington.—*South America.*—See Copper.

Hedley.—*Br. Columbia.*—See Copper.

Heriot, E. M.—*Notes on Spain's Lead Mining Industry.*—E. & M. J., Sept.28,1912; p. 600; 1200 w; 25c.

Hershey, O. H.—*Genesis of the Lead-Silver Ores in Wardner District, Idaho;* [Reply to Ransome].—M. & S. P., Sept.14,1912; p. 344; 3000 w; 20c.

Heym. W.—*Mineral Resources of Japan;* [In German].—See under Coal.

Higgins, W. C.—*The Chief Cons. Mng. Co., Eureka, Tintic District, Utah.*—Salt Lake Mng. Rev., Oct.30, p. 11; 1800 w*; 25c.

Higgins, W. C.—*The Union Chief and Santaquin Mines;* [Southwestern Utah county, U.].—Salt Lake Mng. Rev., Aug. 30,1912; p. 11; 3000 w*; 25c.

Higgins, W. C.—*Mines and Prospects of Mt. Nebo Mining District;* [Juab county, Utah; silver-lead-zinc].—Salt Lake Mng. Rev., Sept.30,1912; p. 11; 2800 w*; 25c.

Hoover, T. J.—*Zinc Corp., Broken Hill;* [Abstract from special report].—Mng. & Engg. Rev., Aug.,1912; p. 410; 1200 w; 35c. Also in Australian Mng. Standd., Aug. 1,1912; p. 100; 2500 w; 35c.

Van Horn, F. R.—*The Occurrence of Silver, Copper and Lead-Ores at the Veta Rica Mine, Sierra Mojada, Coahuila, Mex.;* [Geology and genesis].—Amer. Inst. Mng. Engrs., Bull. 68, Aug.,1912; pp. 867-882*; $1.15.

Jacobs, E.—*Slocan City Mining Division, B. C.*—Canadian Mng. Jnl., Sept.1,1912; p. 592; Oct.1, p. 680; 6000 w; 40c.

Jacobs, E.—*Review of Brit. Columbia Mines Report,* 1911. See Platinum.

Jimenez.—*Estadistica minera en* 1909 *y* 1910, *Peru.*—See under Copper.

Krümmer.—*Geology of Silver-Lead-Zinc Vein Systems, Ems, Germany.*—See Zinc.

McBride.—*British Columbia Mines Report for* 1911.—See under Zinc.

McCaskey.—*Lead in Eastern States,* 1911; *Mine Production.*—See Zinc.

Moore, C. J.—*Recent Developments at Leadville, Colo.*—Economic Geol'y, Sept., 1912; p. 590; 750 w; 65c.

Nevius, J. N.—*The Castle Dome Lead District, Arizona.*—M. & S. P., June22,1912; p. 854; 1800 w*; 20c.

Pulsifer, H. B.—*Brief Notes on the Wisconsin Zinc Field.*—Mining & Engg. World, Nov.2, p. 803; 3000 w*; 10c.

Ransome, F. L.—*Genesis of the Lead-Silver Ores of Wardner District, Idaho.*—M. & S. P., Aug.3,1912; p. 143; 2200 w; 20c.

Rice, C. T.—*Trimming Roofs of High Stopes;* [Practice in southeast Missouri lead district].—E. & M. J., Oct.5,1912; p. 629; 2000 w*; 25c.

Rubio y Munoz, C.—*Datos para el estudio geológico-minero de la Guelaya;* [Economic geology of the Guelaya district, Morocco; chiefly iron and lead].—Inst. Geol. Espana, Bol., Vol. 32, 1911; 1912; pp. —.

Rzehulka, A.—*Der erzführende Muschelkalk in Oberschlesien und den benachbarten Gebieten;* [The ore-bearing shell-limestone in Upper Silesia and the neighboring regions].—Erzbergbau. Dec.1,1912; p. 368; 1100 w; 35c.

Schofield, S. J.—*Reconnaissance in East Kootenay;* [Silver-lead-zinc]. — Canada Geol. Survey, Rep. f. 1911, pp. 158-164*.

Schofield, S. J.—*Origin of the Silver-Lead Deposits of East Kootenay, B. C.*—Econ. Geol'y, June,1912; pp. 351-364*; 65c.

Stewart, C. A.—*The South Belt at Rossland, B. C.*—M. & S. P., July27,1912; p. 107; 1200 w*; 20c.

Stinson.—*Hazelton, B. C.*—See Silver.

Tuttle, Edgar G.—*The Magdalena Mining District, N. Mexico.*—M. & M., Dec.,1912; p. 275; 35c.

Umpleby.—*Ore Deposits of Loon Creek District, Idaho.*—See under Gold.

Ward, L. K.—*The Silver-Lead Lodes of the Waratah District.*—Tasmania Mines Dept. Bull.; 1912; pp. —; $1.50.

Wentworth, I. H.—*The San Nicolas Mining District, San Nicolas, Tamaulipas, Mex.*—Amer. Inst. Mng. Engrs., Bull. 68, Aug., 1912; pp. 843-752*; $1.15.

Zwicky, W. E.—*Rambler-Cariboo Mine, McGuigan Basin, Slocan, B. C.;* [Silver-lead ores, ore-bodies, and geology].—Canadian Mng. Jnl., July20,1912; p. 501; 2500 w; 25c.

———. *Austrian Mines.*—Mg. Jnl., (London), Nov.16,1912; p. 1115; 2000 w; 35c.

———. *Bleierzgewinnung in Oesterreich;* [Lead mining industry in Austria in 1911].—Zentral Verbd. Bergbau Betriebsl. Oestr., Zts., Nov.1, p. 694; 1000 w; 45c.

———. *Electricity in a Spanish Lead Mine;* [A. E. G. pumping, hoisting, etc., appliances in El Guindo mine, Sierra Morena range].—El. Rev. (London), July26, 1912; p. 139; 1500 w*; 35c.

———. *Greenside Mine, England;* [Lake district, Westmoreland; argentiferous lead mining and milling; slime plant].—E. & M. J., Sept.7,1912; p. 460; 1300 w; 25c.

———. *Italian Mines.*—Mg. Jnl., Nov. 23,1912; p. 1143; 1200 w; 35c.

———. *Lead Mining in Missouri;* [Compares mining and treatment costs with Coeur d'Alenes, Idaho].—M. & S. P., July 13,1912; p. 39; 1200 w; 20c.

———. *Mining in Northern Rhodesia;* [Complex lead-zinc ores of Broken Hill, Rh.].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 303; 1500 w*; $1.

———. *Minerals in the Arctic;* [Coal, copper, lead].—Mng. Jnl., Oct.5,1912; p. 987; 1500 w; 35c.

———. *North Fork of Salmon River;* [Nelson division, Kootenay, Br. Columbia].—B. C. Mng. & Engg. Record, April,1912; p. 272; May, p. —; 6000 w; 65c.

———. *Queensland,* 1911.—Mng. Jnl., Aug.3,1912; p. 767; 2000 w; 35c.

———. *The Emily-Edith Mine, Slocan, B. C.;* [Silver-lead].—Canadian Mng. Jnl., June15,1912; p. 410; 1600 w; 25c.

———. *Thornthwaite Mine, England;* [Silver-lead-zinc mine and milling, Lake district Cumberland].—E. & M. J., Aug.10, 1912; p. 270; 1000 w; 25c.

Ore Dressing, Metallurgy, Chemistry, Etc.

Bannister, C. O., and McNamara, W.—*Effect of Lime in the Determination of Lead.*—Mg. & Eng. World, Nov.30,1912; p. 1004; 750 w; 10c.

Bellinger, H. C.—*Presidential Address, Australasian Institute of Mining Engineers;* [Chiefly on metallurgy of lead and copper; action of alumina in slags].—Mng. & Engg. Rev., June,1912; p. 374; 2500 w; 45c. Also in Australian Mng. Standd., June6, p. 529; 3000 w; 35c.

Borchers.—*Metallurgic Progress, Aachen,* 1902-1912; [in German].—See Aluminum.

Canby, R. C.—*Development of the American Water-Jacket Lead Blast-Furnace;* [Read to Internatnl. Congr. of Appl. Chem'y; abstract].—Met. & Chemi. Engg., Sept.12,1912; p. 596; 1000 w; 35c.

Clennell, J. E.—*Estimation of Lead in Cyanide Solutions.*—Mex. Mg. Jnl., Dec., 1912; p. 17; 1800 w; 25c.

Cornwall, W. H.—*Concentrating Low-Grade Silver-Lead Ore at Aspen, Colo.*—Met. & Chemi. Engg., Oct.,1912; p. 652; 1000 w*; 35c.

Dwight, A. S.—*The Dwight-Lloyd Process of Roasting and Sintering;* [Read to Internatnl. Congr. of Appl. Chem'y; abstract].—Met. & Chemi. Engg., Sept.12, 1912; p. 595; 1500 w; 35c. Also abstracted in E. & M. J., Sept.14, p. 486; 600 w; 25c.

Eilers, A.—*Notes on Bag Filtration Plants;* [Murray, Utah, and Omaha, Nebr., plants for recovering lead fume from blast furnace and converters; read to Internatnl. Congr. of Appl. Chem'y; abstract].—Met. & Chemi. Engg., Sept. Suppl., 1912; p. 589, 2000 w*; 35c.

Eilers, A.—*Preparing Furnace Charges and Lead Smelting.*—E. & M. J., July27, 1912; p. 147; 1000 w; 25c.

Eurich, E. F.—*Development of the Parkes Process for Desilverizing Lead in the U. S.;* [Read to Internatnl. Congr. of Appl. Chem'y; abstract].—Met. & Chemi. Engg., Sept.12,1912; p. 597; 750 w; 35c.

Feld, W.—*Centrifugal Gas Washer;* [For purifying blast-furnace gas; recovering metal dust from lead and copper smeltery gases, etc.].—Met. & Chemi. Engg., July,1912; p. 436; 2000 w*; 35c.

Fink, Edward.—*Fink Smelting Furnace for Copper, Lead and Zinc;* [Direct bessemerization of sulphide, zinckiferous ores].—Mining & Engg. World, Nov.2, p. 797; 3800 w*; 10c.

Fischer and Ploetze.—*Lead Dioxide in Electric Pressure Furnace.*—See under Electrometallurgy.

Franke, G.—*Die neue Blende- und Bleierzaufbereitung, Haldensturz- und Wiederverladeanlage der Bleischarleygrube bei Beuthen;* [The new blende and lead-ore treatment, waste-dump and reloading plant of the Bleischarley mine at Beuthen].—Glückauf, Nov.16,1912; p. 1865; 3900 w*; (first part); Nov.23, p. 1906; 5800 w*; (second part); Nov.30,1912; p. 1945*; 2600 (last part); $1.50.

Freundlich, H. and J. Fischer.—*Ueber den Einfluss von Kolloiden auf die elektrolytische Abscheidung des Bleies;* [Influence of colloids on the electrolytic separation of lead].—Zts. f. Elektrochemie, Oct.15, p. 885; 4000 w; 45c.

Friedrich, K.—*Thermische Daten zu den Röstprozessen;* [Decomposition temperatures and thermic reactions in the roasting of the carbonates; cerussite, zinc, iron, manganese, limestone, strontianite, dolomite, magnesite].—Metallurgie, July8,1912; p. 409-418*; 50c.

Goodale, S. L., and H. C. Ray.—*The Pennsylvania Smelting Co. Plant;* [Carnegie, Pa.; chiefly for high-grade silver-lead].—M. & S. P., July27,1912; p. 104; 2200 w*; 20c.

Hale, F. A.—*The Yellow Pine Mill;* [Nevada; Zinc-silver-lead].—Salt Lake Mng. Rev., July30,1912; p. 33; 1200 w; 25c.

Hale, F. A., Jr.—*Yellow Pine Mill, Goodsprings, Nevada;* [Zinc-lead-silver].—E. & M. J., July13,1912; p. 68; 1500 w*; 25c.

Handy, R. S.—*Economic Efficiency in Lead Concentration;* [Frue vanner tests at Bunker Hill & Sullivan mill].—Mines & Minerals, Nov., p. 211; 1000 w*; 35c.

Herwegen, [illegible]: [Flotation processes].—See Zinc.

Holtmann, —. *Leuschner Flotation Process.*—See under Zinc.

Hough, Geo. J.—*The Salida Smelter* [of Ohio & Colo. Smeltg. & Refg. Co., at Salida, Colo.; chiefly lead].—M. & S. P., June29, 1912; p. 895; 800 w* 20c.

Howard, L. O.—*The International Lead Smeltery, Tooele, Utah.*—Salt Lake Mng. Rev., Nov.15, p. 11; Nov.30, p. 9; 4500 w*; 40c.

Kroupa, —. *Ueber einige Fortschritte der Röstung von Bleierzen;* [Some advances in the roasting of lead ores].—Oestr. Zts. f. Berg & Hüttenw., Sept.14, Sept.21; 5 pp.*; 65c.

Neumann.—*Metallurgy in* 1911 [in German].—See Tin.

Plötze, H.—*Oxydationsreaktionen im elektrischen Druckofen mit den Oxyden des Strontiums und Bleies und den Hydroxyden der Alkalien;* [Oxidation reactions in the electric pressure furnace with strontium and lead oxides and the alkaline hydroxides].—Berlin dissert; 1912; 67 pp.; $1 (Thesis).

Pulsifer, H. B.—*Metallurgy of Lead; Flue-Dust, Fume and Acid.*—Salt Lake Mng. Rev., Nov.15, p. 19; Nov.30, p. 18; 6500 w*; 25c.

Pulsifer, H. B.—*The Metallurgy of Lead; Refining.*—Salt Lake Mng. Rev., Oct. 30, p. 18; 2800 w*; 25c.

Pulsifer, H. B.—*The Metallurgy of Lead;* [Improving and operating the blast furnace].—Salt Lake Mng. Rev., Aug.15,1912; p. 19; Aug.30, p. 16; Sept.15, p. 15; Sept.30, p. 19; Oct.15, p. 19; 10,000 w*; 90c.

Pütz, O.—*Stand der Aufbereitung kiesiger Zink- und Bleierze in Oberschlesien;* [Present status of the dressing of pyritic and sulphide zinc-lead ores in Upper Silesia; read to Ges. Deu. Metallhütten & Bergleute; abstract].—Deu. Bergwerks Ztg., Oct.1, p. 1; 500 w; 35c.

Published in full in Metall & Erz, Oct. 22, pp. 41-59*; 50c.

Rice, C. T.—*Joplin Ore Bin Construction.*—E. & M. J., June22,1912; p. 1232; 1500 w*; 25c.

Siebenthal, C. E.—*Lead in* 1911; *Smelter Production.*—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 41 pp; 20c.

Strassner, —. *L'atelier de préparation des minerais de zinc et de plomb de Diepenlinchen;* [The Diepenlinchen lead-zinc mill near Stolberg, Germany; French abstract from "Metallurgie," 1911, pp. 645-650].—Rev. de Métal'gie, June.1912; p. 319; 1000 w; $1.15.

Wagner, P. A.—*Mining and Ore Treatment at Tsumeb (Otavi) in German S. W. Africa;* [Copper-lead ores and smelting].—S. Afr. Mng. Jnl., Anniversary No., Sept., 1912; p. 323; 1700 w; $1.

Wagenmann, K.—*Das System Bleiglanz-Antimonglanz und die Laugerei antimonhaltiger Bleiglanze;* [Lead-antimony sulphides in pig-lead, and the leaching of antimony-bearing lead sulphides].—Metallurgie, Aug.22,1912; pp. 518-523*; Sept.8, pp. 537-543*; 95c.

Wentworth.—*Electrostatic Concentration; Huff Processes.*—See under Zinc.

Westling, E. H.—*Proposed Treatment of Sulphide Ores with Nitric Acid, or So-Called Rankin Process.*—Met. & Chem'l. Engg., Nov.,1911; pp. 571-573; 2000 w; 35c. Abstract in Chem'l. Met. & Mng. Soc. of S. Afr., Jnl.; April,1912; p. 423; 2000 w; 90c.

Wood.—*Flotation Process.*—See Molybdenum.

———. *Desloge Picking Shaker;* [at Cons. Lead Co. mines, southeast Missouri].—E. & M. J., Nov.9, p. 883; 900 w*; 25c.

———. *Early Western Lead Smelting.*—E. & M. J., Oct.26, p. 796; 600 w*; 25c.

———. *Hexagonal Trommel for Fine Puln;* [at Desloge lead mill, Mo.].—E. & M. J., Nov.2, p. 833; 900 w; 25c.

———. *Lead Mining and Smelting in Scotland.*—Canadian Mng. Jnl., Oct.1, p. 678; 1000 w; 25c.

———. *New Plants at Broken Hill; Junction North Mill.*—See under N. S. Wales.

———. *Overstrom Modification of Harz Jig;* [In use in southeastern Missouri lead district].—E. & M. J., Aug.24,1912; p. 351; 1000 w*; 25c.

— —. *Present Smelting Rates in Utah.*—E. & M. J., July20,1912; p. 125; 1500 w; 25c.

———. *The Bisulphite Process and Treatment of Complex Zinc-Lead Ores;* [Criticism of proposed plan in Tasmania].—Australian Mng. Standd., Aug.29,1912; p. 2[illegible]; 3000 w; 35c.

———. *Trommel for Coarse Dry Ore;* [Doe Run Lead Co., Mo.].—E. & M. J., Oct. 12, p. 689; 800 w*; 25c.

Miscellaneous.

Allen and Bishop.—*Exact Estimation of Sulphur in Pyritic Ores.*—See Sulphur.

Brown, C.—*Mineral Witches and Divining Rods in the Joplin District.*—Mining & Engg. World, July20,1912; p. 111; 800 w; 10c.

Clifford, Jas. O.—*Industrial Lead Poisoning.*—M. & S. P., July6,1912; p. 9; 3500 w; 20c.

Dunlop, J. P.—*Marketing Lead and Zinc Ores in the U. S.;* [From U. S. Geol. Survey, Mineral Resources for 1911].—Mining & Engg. World, Oct.26, p. 769; 500 w; 10c.

Fabien, —. *Determination rapide du plomb contenu dans les scories;* [Rapid estimation of lead in slags].—Soc. Amicale de Douai, Bull., Oct.10,1912; p. 657; 500 w; [illegible].

Fischer and Stecher.—*Rapid Electro-[illegible]* [in German].—See Copper.

Hoskins, A. J.—*The Markets for Joplin Ores.*—Mines & Minerals, Sept.,1912; p. 103; 1000 w; 35c.

Houben, —. *Solubility of Oxides and Sul[illegible] in Metal Salts;* [in German].—See Zinc.

Lebedew, P. P.—*Ueber die Schwefelbleielektrode und über die Passivität des Bleies;* [The lead sulphide electrode and [illegible] of lead].—Zts. f. Elektrochemie, [illegible].1912; p. 891; 3200 w*; 45c.

Parry, L.—*Treatment of Metal Wastes.*—See under Antimony.

Rebeyrol.—*World's Metal Markets in* 1910; [in French].—See Nickel.

Schaeffer, J. A.—*Colorimetric Determination of Iron in Lead and Its Oxides.*—Jnl. of Ind'l & Engg. Chem'y; Sept.,1912; p. 659; 800 w; 65c.

Westby, —. *Smelter Smoke Conservation.*—See Thermic Metallurgy (Fumes, etc.).

Wittich, L. L.—*Profits in Lead Smelting;* [Joplin District, Mo.].—M. & S. P., Oct.19, p. 503; 800 w*; 20c.

———. *Australasian Institute of Mining Engineers; New South Wales Trip,* 1912. —See under New South Wales.

———. *Estimation of Lead in Smelter Gases.*—Mng. Mag., Aug.,1912; p. 147; 1200 w; 45c.

———. *Methods of Analysis from the Laboratories of Armour Institute; IV: Determination of Lead in Ores.*—Cheml. Engr., July,1912; p. 36; 2100 w; 35c.

———. *New Colorado Smelting Schedules.*—E. & M. J., Sept.14,1912; p. 509; 1000 w; 25c.

———. *Produktionserhebungen in Erzbergbaubetrieben* 1909-1910; [Statistics of mine and mill production, German empire, 1909 and 1910; lead, silver, zinc, copper, arsenic, pyrite].—Erzbergbau, June15,1912; pp. 203-205; tables; 35c.

———. *Tailings Dewatering Wheel;* [at Rivermine, Mo., lead mills].—E. & M. J., Aug.31,1912; p. 399; 1000 w*; 25c.

———. *The Producer and Smelter of Lead-Zinc Ores;* [Editorial discussion of prices-penalties problem].—Met. & Cheml. Engg., July,1912; p. 389; 600 w; 35c.

"Mining Accountant." — *Broken Hill Mines, N. S. W.*—See Silver.

ZINC.

Mines and Mining and Geology.

Allen and Crenshaw.—*Zinc, Cadmium and Mercury Sulphides; Genesis.*—See Zinc.

Allan, J. A.—*Geology of Field Map Area, B. C.;* [Lead-zinc-silver].—Canada Geol. Survey, Rep. f. 1911; 1912; pp. 175-187*.

Bancroft, J. A.—*Report on the Geology and Mineral Resources of Keekeek and Kewagama Lakes Region;* [Adverse report on gold; describes molybdenite, iron and lead-zinc finds].—Quebec Dept. Mines Report for 1911; 1912; pp. 160-207*; $1. Abstract in Mining & Engg. World, Oct.5, p. 619; 3600 w*; 10c.

Baumgärtel, B.—*Der Oberharzer Erzbergbau;* [Mining industry of the Upper Hartz, Prussia].—Clausthal, 1912; $1.25 (book).

Blair, J. I.—*Arbuckle Zinc Field, Oklahoma.*—E. & M. J., Aug.3,1912; p. 223; 500 w; 25c.

Bordeaux, Alb.—*Mines of the Vladivostok District, Siberia;* [Gold, zinc, lead-silver, copper, lignite].—E. & M. J., June22,1912; p. 1236; 750 w; 25c.

Bornhardt, W.—*Die Erzvorkommen des Rheinischen Schiefergebirges;* [Geology of the commercial lead and zinc lodes of the Rhenish slate formations; read to Ges. Deu. Metallhütten & Bergleute].—Metall & Erz, Oct.8, p. 2-11; 8000 w*; 45c. Abstract in Deu. Bergwerks Ztg., Oct.1, p. 1; 750 w; 35c.

Brown, C.—*North Arkansas Mining Field Looks Promising;* [Lead-zinc developments].—Mining & Engg. World, Sept.14, 1912; p. 490; 1200 w; 10c.

Butler, —. *Recent Developments at Leadville, Colo.*—See under Lead.

Cox, G. H.—*New Type of Wisconsin Zinc Deposit*—E. & M. J., Nov.30,1912; p. 1040; 1800 w*; 25c.

Dunlop, J. P.—*Silver, Copper, Lead and Zinc in the Central States in* 1911; *Mine Production;* [Ark., Ill., Iowa, Kans., Ky., Mo., Okla., Wis.; Michigan by B. S. Butler].—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 82 pp; 20c.

Emmons and Larson.—*Geology and Ore Deposits of Creede, Colo.*—See Silver.

Fishback.—*Organ Mtns., N. Mex.*—See Copper.

Goodchild, W. H.—*Valuation of Base-Metal Mines.*—Mng. Mag., July,1912; p. 50; 2100 w; 45c.

Hale, Fred A., Jr.—*The Yellow Pine Mining District, Nev.*—Mex. Mg. Jnl., Dec., 1912; p. 29; 2500 w*; 25c.

Herwegen, Leo.—*Die Schwimmverfahren, ihre Entwickelung und Bedeutung für die Erzaufbereitung;* [The flotation processes, development and significance in ore dressing].—Glückauf, July27,1912; pp. 1185-1194; Aug.3, pp. 1231-1242*; 75c.

Herwegen, L.—*Ueber die Bedeutung der Flotationstechnik;* [The significance of flotation methods with special reference to Austrian ores; read to Bergmannstag, Vienna, Sept.,1912; abstract].—Montanist. Rundschau, Sept.15,1912; p. 965; 600 w; 50c.

Heym, W.—*Mineral Resources of Japan;* [in German].—See under Coal.

Higgins.—*Mt. Nebo, Utah.*—See Lead.

Hoover, T. J.—*Zinc Corp., Broken Hill;* [Abstract from special report].—Mng. & Engg. Rev., Aug.,1912; p. 410; 1200 w; 35c. Also in Australian Mng. Standd., Aug. 1,1912; p. 100; 2500 w; 35c.

Hoskin, A. J.—*Revival of Mining at Red Cliff, Eagle Canyon, Colo.*—Mines & Minerals, Oct.,1912; p. 147; 3700 w*; 35c.

Jacobs.—*Slocan District, B. C.*—See Lead.

Jacobs, E.—*Review of Brit. Columbia Mines Rep.,* 1911. See Platinum.

Krümmer, Ad.—*Die Tektonik des Emser Gangzuges;* [Faults, folding and tectonics of the silver-lead-zinc vein systems of the Ems district, Hesse-Nassau].—Zts. f. prakt. Geologie, Aug.,1912; pp. 301-319*; 75c.

de Launay, L. and G. Urbain.—*Recherches sur la métallogénie des blendes et des minéraux qui en dérivent;* [The genesis of blendes and the minerals derived therefrom].—Soc. Geol. France, Bull.; Ser. 4,

McBride, R.—*Annual Report of the Minister of Mines for the Year Ending 31st December,* 1911; [British Columbia; Gold mining and dredging, silver, lead, copper, zinc, coal, coke, iron ore, platinum, building stone, brick, lime, cement; reports on various districts].—Victoria, B. C., 1912; 313 pp*; $1.50.

Reviewed by E. Jacobs in Canadian Mng. Jnl., July15, p. 495; 2500 w; 25c. Also in Mining & Engg. World, July20, p. 99; July 27, p. 149; 7000 w; 20c. Also reviewed in B. C. Mng. & Engg. Record, June, p. 331; 4000 w; 35c.

McCaskey, H. D.—*Gold, Silver, Copper, Lead and Zinc in the Eastern States in* 1911; *Mine Production;* [Statistics and review for Ala., Conn., Ga., Me., Md., Mass., N. Hamp., N. J., N. Y., N. Car., Penn., S. Car., Tenn., Vt., Va.].—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 18 pp; 20c.

Abstract in M. & S. P., June22, p. 853; 500 w; table; 20c.

Moore, C. J.—*Recent Developments at Leadville, Colo.*—Economic Geol'y, Sept., 1912; p. 590; 750 w; 65c.

Pulsifer, H. B.—*Brief Notes on the Wis-*

consin Zinc Field.—Mining & Engg. World, Nov.2, p. 803; 3000 w*; 10c.

Purdue, A. H.—*The Zinc Deposits of Northeastern Tennessee.*—Mng. Sci., Oct.17, p. 249; 3000 w*; 20c.

Purdue, A. H. and H. D. Miser.—*The Zinc Deposits of Northeastern Tennessee.*—Tenn. Geol. Survey, Bull. 14; 1912; 69 pp*; 50c.

Rice, C. T.—*Joplin Ore Bin Construction.*—E. & M. J., June22,1912; p. 1232; 1500 w*; 25c.

Ruhl, O.—*Prospect Drilling in the Joplin District, Mo.*—Mex. Mng. Jnl., Oct.,1912; p. 40; 2800 w; 25c.

Rzehulka, A.—*Der erzführende Muschelkalk in Oberschlesien und den benachbarten Gebieten;* [The ore-bearing shell-limestone in Upper Silesia and the neighboring regions].—Erzbergbau, Dec.1,1912; p. 368; 1100 w; 35c.

Schofield, S. J.—*Reconnaissance in East Kootenay;* [Silver-lead-zinc]. — Canada Geol. Survey, Rep. f. 1911, pp. 158-164*.

Siebenthal, C. E.—*Zinc and Cadmium in 1911; Smelter Production.*—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 54 pp; 10c.

Tuttle, Edgar G.—*The Magdalena Mining District, N. Mexico.*—M. & M., Dec., 1912; p. 275; 35c.

Weed.—*Butte, Montana.*—See Copper.

"Mining Accountant." — *Broken Hill Mines, N. S. W.*—See Silver.

———. *Italian Mines.*—Mg. Jnl., Nov. 23,1912; p. 1143; 1200 w; 35c.

———. *Minerals of Primorsk Province, Russia.*—Mining & Engg. World, Aug.31, 1912; p. 387; 1200 w; 10c.

———. *Mining in Northern Rhodesia;* [Complex lead-zinc ores of Broken Hill, Rh.].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 303; 1500 w*; $1.

———. *Mine and Mill Production, Germany,* 1909-1910.—See under Lead.

———. *Thornthwaite Mine, England:* [Silver-lead-zinc mine and milling, Lake district, Cumberland].—E. & M. J., Aug.10. 1912; p. 270; 1000 w; 25c.

Ore Dressing, Metallurgy, Chemistry, Etc.

Allen and Bishop.—*Exact Estimation of Sulphur in Pyritic Ores.*—See Sulphur.

Boericke, W. F.—*Small Concentrating Mills in the Wisconsin Zinc District.*—M. & S. P., June15,1912; p. 828; 3500 w*; 20c.

Borchers.—*Metallurgic Progress, Aachen,* 1902-1912; [in German].—See Aluminum.

Breger, C. L.—*The "American" Zinc Smelter at Hillsboro, Illinois.*—Mining & Engg. World, Nov.9, p. 847; 5000 w*; 10c.

Breyer, F.—*The Ferrocyanide Titration of Zinc;* [Read to Internatnl. Congr. of Appl. Chem'y; abstract].—E. & M. J., Sept. 21,1912; p. 552; 500 w; 25c.

Bussachi, A.—*Sul' Contributo alla elettrometallurgia dello zinco';* [Critical notes on Gallo's paper on the electrometallurgy of zinc].—Rassegna Mineraria, Sept.21,1912; p. 153; 1500 w; 35c.

Clerc, F. L.—*A Zinc Retort with a Copper Bottom.*—Met. & Cheml. Engg., Aug., 1912; p. 463; 1500 w*; 35c.

Clerc, F. L.—*The Chemical and Physical Reactions in a Zinc Retort.*—Met. & Cheml. Engg., July,1912; p. 399; 3000 w; 35c.

Dunn, J. A.—*Fuel Economy in Zinc Metalurgy, Power Production and Mining;* [Discusses Parkinson furnace].—Met. & Cheml. Engg., Aug.,1912; p. 498; 1800 w; 35c.

Englehardt, V.—*Zinkelektrolyse in wässriger Lösung;* [Review of progress and present status of electrolytic production of zinc with special reference to chloride and sulphate watery solutions with insoluble anodes; Siemens-Halske processes; read to Ges. Deu. Metallhütten & Bergleute; abstract].—Beu Bergwerks Ztg., Oct.1, p. 1; 400 w; 35c.

Ericson, E. J.—*A New Technical Method of Spelter Analysis.*—8th Internatnl. Congr. of Appl. Chem'y, Vol. 1; 1912; pp. 183-186.

Fink, Edward.—*Fink Smelting Furnace for Copper, Lead and Zinc;* [Direct bessemerization of sulphide, zinckiferous ores].—Mining & Engg. World, Nov.2, p. 797; 3800 w*; 10c.

Franke, G.—*Die neue Blende- u. Bleierzaufbereitung, Haldensturz- u. Wiederverladeanlage der Bleischarleygrube bei Beuthen;* [The new blende and lead-ore treatment, waste-dump disposal and reloading plant of the Bleischarley mine at Beuthen].—Glückauf, Nov.30,1912; p. 1945*; 2600 (last part); 50c.

French, A. G.—*French's Electrolytic Zinc Process;* [Outline of treatment of Slocan, B. C., silver-lead-zinc ores, at Nelson].—Canadian Mng. Jnl., July15,1912; p. 475; 500 w; 25c.

Friedrich.—*Reactions in Roasting of Corbonates;* [in German].—See under Lead.

Gallo, G.—*Sul contributo all'elettrometallurgia dello zinco;* [Notes on Busachi's paper on electrometallurgy of zinc].—Rassegna Mineraria, Oct.21, p. 218; 600 w; 35c.

Gallo, Gino.—*Contributo alla elettrometallurgia dello zinco;* [The electrometallurgy of zinc].—Rassegna Mineraria, Aug.1,1912; p. 57; Aug.11, p. —; 9000 w; 75c.

Ganet, L.—*De l'électrométallurgie du zinc;* [Electric smelting of zinc].—Jnl. du Four Electriq., Aug.1,1912; p. 337; 1500 w; 35c. Also in Echo d. Mines, Aug.8, p. 891; 1500 w*; 35c.

Hale, F. A.—*The Yellow Pine Mill;* [Clark county, Nev.; Zinc-silver-lead].—Salt Lake Mng. Rev., July30,1912; p. 33; 1200 w; 25c. Also in E. & M. J., July13, 1912; p. 68; 1500 w*; 25c.

Holtmann, —. *The Leuschner Flotation Process;* [at Friedrichssegen mines, Lahn, Germany, and elsewhere; chiefly on chalcopyrite, blende, galena; from "Glückauf," March9,1912].—Mng. Jnl., Apr.20,1912; p. 402; 1000 w; 35c. Also in E. & M. J., Sept. 28, p. 581; 1600 w; 25c.

Hommel, W.—*Die Prinzipien der Blenderöstung in Muffelöfen;* [Principles of blende roasting in the muffel furnace].—Metallurgie, May8,1912; p. 281; 12,000 w*; 50c.

English abstract in E. & M. J., Oct.12, p. 697; Oct.19, p. —; 10,000 w; 40c.

French abstract in Rev. de Métallurgie, Sept.,1912; pp. 699-720*; $1.15.

Houben, H.—*Ueber die Löslichkeit von Metalloxyden und Metallsulphiden in geschmolzenem Natriumchlorid;* [The solubility of metallic oxides and sulphides in molten salt, sodium chloride; tin oxide, and lead, zinc and copper oxides and sulphides].—Metallurgie, Sept.22,1912; pp. 592-604*; 50c.

Ingalls, W. R.—*Electric Smelting of Zinc Ore.*—Canadian Mng. Inst., Trans.; Vol. 15, No. 1; 1912; pp. 3-16; $1.15.

Abstract in E. & M. J., July6,1912; p. 7;

5000 w; 10c. Also in Mining & Engg. World, July13, p. 58; 5000 w; 10c. Also in Mng. Sci., Aug.1, p. 71; Aug.8, p. 88; 5000 w; 30c. Also in Met. & Chemi. Engg., Aug., p. 481; 4800 w; 35c.

Inouye, T.—*Flotation of Zinc Ores in Japan;* [at Kamioka mine, Hida and Ttchu provinces].—M. & S. P., June29,1912; p. 892; 1000 w*; 20c.

Johnson, W. McA.—*2-Stage Electric Smelting of Iron Ore;* [Johnson zinc furnace applied to iron].—Iron Age, Aug.29, 1912; p. 450; 1000 w*; 30c.

Johnson, W. Mc. A.—*Notes on Electric Zinc Smelting.*—Met. & Chemi. Engg., Sept., 1912; p. 537; 1000 w*; 35c.

Juretzka, F.—*Die Anlage von Zinkhütte;* [The laying-out of zinc smelting plants].—Centralbl. d. Hütten & Walzwerke, Sept.25, 1912; p. 502; Oct.5, p. —; 5000 w*; 50c.

Juretzka, Franz.—*Die Herstellung der Zinkmuffel in Rheinland und Belgien;* [The manufacture of zinc muffles in Rheinland and Belgium].—Metall u. Erz, Nov. 8,1912; p. 78; 4000 w*; 50c.

Juretzka, Franz.—*Verhüttung von Zinkerzen;* [The smelting of zinc ores].—Centralblatt der Hütten u. Walzwerke, Nov.15, 1912; p. 602; 3000 w; 25c.

König, H.—*Automatisch arbeitende Rohrverzinkungsanlagen;* [Some automatically operating zinc electroplating plants for iron pipes and tubes].—Helios, Vol. 18, 1912; pp. 869-872; 961-965*; $1. Abstract in Zts. f. Elektrochemie, Junel, p. 438: 3000 w*; 45c.

Krantz, Fr.—*Die Entwickelung der Oberschlesischen Zinkindustrie;* [Metallurgy of zinc in Upper Silesia; history, mining, treatment, smelting and industrial].—Kattowitz, 1912; 96 pp.*; $2.50 (book).

Abstracts in French (by Desmarets), on smelting, in Rev. de Metallurgie, Aug., 1912; pp. 577-600*; $1.15.

Louvrier, F.—*Causes of the Practical Non-Success of Electric Furnaces in Treating Zinc Ores.*—Met. & Chemi. Engg., Nov., 1912; p. 747; 2000 w; 35c.

Maillet, G. A. — *Electrométallurgie du Zinc;* [Côte-Pierron electric zinc smelting furnace at Arudy, France].—Jnl. du Four Electriq., Sept.15,1912; p. 385; 1000 w*; 35c.

Meuskens, Cl.—*Das Schwimmverfahren der Mineral Separation, Ltd.;* [Flotation process of Minerals Separation, Ltd., for copper, zinc, molybdenum and silver-gold ores].—Techn. Blätter, Sept.21,1912; p. 297; 3000 w*; 35c.

Nagel, O.—*Ueber die Gewinnung des Zinks im Hochofen mit Hilfe von Wassergas;* [Use of water-gas in the production of zinc in the blast furnace].—Chemiker Ztg., June4,1912; p. 621; 1000 w*; 35c.

Nemes, A.—*Altes und Neues über Blenderöstung;* [Old and new processes in the roasting of zinc blende].—Metallurgie, Aug. 22,1912; p. 516; 1000 w*; 45c.

Neumann.—*Metallurgy in* 1911 [in German].—See Tin.

Parmelee, H. C.—*Zinc Ore-Dressing in Colorado;* [Chiefly on magnetic separation, and roastings and drying].—Met. & Chemi. Engg., Sept.,1912; p. 527; 3200 w*; 35c.

Parsons, C. L.—*Losses in the Concentration of Zinc Ores;* [Bulletin 47, U. S. Bur. Mines; abstract].—Mg. & Eng. World, Nov.23,1912; p. 956; 1100 w; 10c.

Pütz, O.—*Stand der Aufbereitung kiesiger Zink- und Bleierze in Oberschlesien;* [Present status of the dressing of pyritic and sulphide zinc-lead ores in Upper Silesia; read to Ges. Deu. Metallhütten & Bergleute; abstract].—Deu. Bergwerks Ztg., Oct.1, p. 1; 500 w; 35c.

Prosser, W. C.—*Electrostatic Zinc Plant, Sunnyside Mill;* [Huff process at Eureka, Colo.].—E. & M. J., July20,1912; p. 105; 250 w*; 25c.

Reddie, R.—*Recent Jig Design;* [Improved rougher jig and Heberle gate, treating zinc carbonate in dolomite].—Mines & Minerals, Oct.,1912; p. 170; 800 w*; 35c.

Richards, J. W.—*Reduction of Zinc Oxide;* [Heat reactions at 1125° C.].—E. & M. J., June22,1912; p. 1214; 600 w; 25c.

Robertson, W. F.—*French Zinc Process;* [Nitre-cake process for recovering zinc from silver-lead-zinc concentrates].—NW. Mng. News, Oct.,1912; p. 8; 1500 w; 35c.

Sanna, R.—*Cernitori magnetici della miniera di Aquaresi;* [Magnetic concentration of calcined calamine at the Aquaresi mine, Sardinia].—Asso. Mineraria Sarda, R-C; June23,1912; p. 5; 400 w*; 50c.

Schneider, —. *Concentration at Butte & Superior Mill.*—See under Copper.

Strassner, —. *L'atelier de préparation des minerais de zinc et de plomb de Diepenlinchen;* [The Diepenlinchen lead-zinc mill near Stolberg, Germany; French abstract from "Metallurgie," 1911, pp. 645-650].—Rev. de Métal'gie, June,1912; p. 319; 1000 w; $1.15.

Wentworth, H. A.—*Electrostatic Concentration or Separation of Ores;* [Reviews Huff process at various U. S. and Mexican mills].—Amer. Inst. Mng. Engrs., Bull. 66, June,1912; pp. 633-648*; $1.15.

Westling.—*Rankin Nitric Acid Process for Sulphide Ores.*—See under Lead.

Wood.— *Flotation Process.*—See Molybdenum.

———. *Calcination de la Blenda;* [Calcination of blende].—Revista Minera, Nov. 16,1912; p. 534; 2300 w; 35c.

———. *Condensation Problem in Electric Zinc Smelting.*—Met. & Chemi. Engg., Aug.,1912; p. 451; 1000 w; 35c.

———. *Electrostatic Separation of Barite and Sphalerite.*—E. & M. J., Dec.7,1912; p. 1039; 600 w; 25c.

———. *La pratique du grillage de la blende;* [The practice in Europe and America of blende roasting].—Echo d. Mines, Oct.10, p. 1052; 2000 w; 35c.

———. *Le zinc électrique;* [Electro-furnace zinc; status in France and Italy].—Jnl. du Four Electriq., Sept.1,1912; p. 367; 1000 w; 35c.

———. *Milling at the Butte and Superior.*—M. & S. P., June29,1912; p. 893; 500 w; 20c.

———. *New Plants at Broken Hill; Junction North Mill.*—See under N. S. Wales.

———. *New Processes in Metallurgy of Zinc;* [Peterson, French, Seager, Wettengell, Hughes, Hopkins, Sulman-Picard, Malm and other processes].—B. C. Mng. & Engg. Record, May,1912; p. 299; 1200 w; 30c.

———. *Present Smelting Rates in* [illegible].—E. & M. J., July20,1912; p. 125; 1500 w; 25c.

———. *Tendencies in Zinc Metallurgy.*—Met. & Chemi. Engg., Aug.,1912; p. 450; 700 w; 35c.

———. *The Bisulphite Process and Treatment of Complex Zinc-Lead Ores;*

[Criticism of proposed plan in Tasmania].—Australian Mng. Standd., Aug.29,1912; p. 200; 3000 w; 35c.

———. *The Marino Process for Electro-Zincing;* [on glass and earthenware, etc.].—Engg. Rev., June,1912; p. 505; 2000 w; 35c.

———. *The Producer and Smelter of Lead-Zinc Ores;* [Editorial discussion of prices-penalties problem].—Met. & Cheml. Engg., July,1912; p. 389; 600 w; 35c.

———. *Traitement des minerais mixtes sulfurés à basse teneur en zinc;* [Treatment of mixed sulphides of low zinc content].—Rev. Ind'l du Centre, Aug.31,1912; p. 9; 800 w; 35c.

———. *Treatment of California Zinc-Copper Ores.*—Met. & Cheml. Engg., Sept., 1912; p. 564; 600 w; 35c.

Miscellaneous.

Allen, E. T., and J. L. Crenshaw.—*Sulphides of Zinc, Cadmium and Mercury; their Crystalline Forms and Genetic Conditions;* with a *Microscopic Study* by H. E. Merwin.—Amer. Jnl. of Sci., Oct.,1912; p. 341-368*; 65c.

Bernheim.—*Ueber das Trockenverzinken oder Sherardisieren;* [Dry zinc plating or Sherardizing].—Stahl & Eisen, May23,1912; p. 857-860*; 75c.

Beyne, Edgar.—*Dosage du zinc dans les minerais ferrugineux;* [Estimation of zinc in ferruginous ores and concentrates].—Soc. Chimiq. Belgiq., Bull.; July,1912; p. 355; 2400 w; 65c.

Brown, C.—*Mineral Witches and Divining Rods in the Joplin District.*—Mining & Engg. World, July20,1912; p. 111; 800 w; 10c.

Buchert, G. — *Maschinelle Rohrverzinkung;* [Mechanical zinc plating of iron pipe].—Stahl & Eisen, Sept.5,1912; 2 pp.*; 55c.

Döring.—*Progress in Metal Analysis,* 1911; [in German].—See under Copper.

Dunlop, J. P.—*Marketing Lead and Zinc Ores in the U. S.;* [From U. S. Geol. Survey, Mineral Resources for 1911].—Mining & Engg. World, Oct.26, p. 769; 500 w; 10c.

Filitz, Fr.—*Praktischer Leitfaden für Zinkhütten-Laboratorien;* [Practical guide for zinc smelter laboratories].—Kattowitz, 1911; pp. —; 5 figs; $3.50 (book).

Fischer and Stecher.—*Rapid Electro-analysis* [in German].—See Copper.

de Koninck, L. L. and Edm. von Winiwarter.—*Essais des minerais de zinc; séparation du fer par l'ammoniaque;* [Zinc ore analysis; separation of iron by ammonia].—Soc. Chimiq. Belgiq., Bull; May,1912; pp. 238-243; 2000 w; 50c.

Hommel, W.—*Zur Geschichte des Zinks;* [History of zinc; origin of name and first conception of zinc as a metal].—Chemiker Ztg., Aug.8,1912, p. 905; Aug.13, p. 918; 6000 w; 50c.

Hoskins, A. J.—*The Markets for Joplin Ores.*—Mines & Minerals, Sept.,1912; p. 103; 1000 w; 35c.

Ingalls, W. R.—*How the Metals are Sold, —Spelter.*—E. & M. J., Oct. 26, p. 789; 2700 w; 25c.

König, H.—*Appareils automatiques pour le zinguage des tubes;* [Automatic zinc plating of pipes].—Rev. d'Electrochimie, June, 1912; p. 182; 3500 w; 45c.

Parry, L.—*Treatment of Metal Wastes.* —See under Antimony.

Rebeyrol.—*World's Metal Markets in* 1910; [in French].—See Nickel.

Richards, Jos. W.—*The Volatilization of Metals.*—Am. Inst. Metals paper; 2 p.; 20c.

Schilling, H.—*Ueber die gravimetrische Bestimmung des Zinks;* [On the gravimetric determination of zinc].—Chemiker Ztg., Nov.16,1912; p. 1352; 700 w; 30c.

Scholtissek, E.—*Erläuterungen zum D. R. P. No.* 237,779; [Elimination of pores in zinc plates, and production of high-grade plates in zinc rolling mills; remarks on German Pat. No. 237,779].—Kohle & Erz, Aug.19,1912; p. 851; 2400 w; 35c.

Siebenthal, C. E.—*Midyear Spelter Statistics,* 1912; [U. S. Geol. Survey].—Mining & Engg. World, July27,1912; p. 151; 800 w; 10c. Also in M. & S. P., Aug.3, p. 149; 800 w; 20c.

Spear, Ellwood B., and Strahan, Samuel S.—*The Determination of Zinc by Electro-analysis;* [Paper read before Int. Cong. Appl. Chem.].—Jnl. Ind. & Eng. Chem., Dec.,1912; p. 889; 2000 w; 75c.

Thompson, M. de K.—*Simultaneous Electrolytic Deposition of Copper and Zinc from Various Solutions Not Containing Cyanide;* [in brass plating].—Met. & Cheml. Engg., Aug.,1912; p. 458; 3800 w; 35c.

———. *Methods of Analysis Used in the Laboratories of Armour Institute of Technology; IV: Determination of Zinc in Ores.* —Cheml. Engr., Aug.,1912; p. 55; 1800 w; 35c.

———. *Zinc Producers and the Price of the Metal;* [Reviews Zinc Corp., Amalg. Zinc (de Bavay's), and Central Zinc].—Mng. World (London), Sept.21,1912; p. 344; 2700 w; 35c.

CHAPTER IV.

Iron and Steel.

Ores and Mining.

von der Aa, —. *Steinkohle, Braunkohle, Eisenerz und Eisenindustrie;* [Teubner's Monographs of Commercial Geography of Germany; Vol. 11: The hard-coal, lignite, iron-ore and siderurgic industries].—Leipzig and Berlin, 1912; Map and explanatory text; $2.

Abele, C. A.—*Statistics of the Mineral Production of Alabama for* 1910.—Ala. Geol. Survey, Bull. 12; 1912; 51 pp.

Allen, R. C.—*Iron River District, Michigan;* [Extracts from "Mineral Resources of Michigan"].—E. & M. J., June29,1912; p. 1264; 500 w; 25c.

Arthur, R.—*Mineral Resources of the Philippine Ids.*—Mining & Engg. World, July20,1912; p. 107; 2000 w*; 10c.

Bancroft, J. A.—*Report on Keekeek Lake District.*—See Gold under Geology.

Barrows, W. A., jr.—*The Cuyuna District, South Range, Iron Ores, Minnesota;* [Read to Amer. Inst. Mng. Engrs.].—Iron Trade Rev., Nov.14, p. 923; 1200 w; 20c.

Berger, L.—*Chinas Bergbau, speziell seine Kohlen- und Eisen-industrie;* [China's mining, especially its coal and iron industry].—Technische Blätter, Nov.30,1912, p. 377; 2400 w*; 35c.

Berteling, J. F.—*Mining Iron on the Menominee Range.*—Mine & Quarry, June, 1912; 20c.

Extract on the Zimmerman Mine, Iron River District.—E. & M. J., July13,1912; p. 57; 1600 w; 25c.

Blumenau, H.—*Einige weniger bekannte Erzlagerstätten Spaniens;* [Some of the lesser-known ore deposits of Spain].—Metall u. Erz, Nov.8,1912; p. 74; 2000 w; 50c.

Bogdanowitsch, K. J.—[*The iron ores of Russia; geology, distribution, and supplies* (in Russian)].—St. Petersburg, 1911; 327 pp*; $3 (book).

von Bonhorst, C.—*Uran-, Wolfram- und Eisenerze in Portugal;* [Uranium, tungsten and iron ores of Portugal].—Chemiker Ztg., June18,1912; p. 689; 1000 w; 35c.

Bornhardt, —. *Die Erzvorkommen des Rheinischen Schiefergebirges;* [Geology of the commercial iron and manganese ore bodies of the Rhenish slate formations; read to Ges. Deu. Metallhütten & Bergleute; abstract].—Deu. Bergwerks Ztg., Oct.1, p. 1; 750 w; 35c.

Bragge, Geo. S.—*The Coal and Iron Industries of Derbyshire and Nottinghamshire;* [Read to Surveyors' Instn.; abstract].—Iron & Coal Trades Rev., July19, 1912; p. 94; 1800 w*; 35c.

Burchard, E. F.—*The Production of Iron Ore, Pig-Iron and Steel in* 1911.—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 58 pp; 20c.

Burchard.—*Manganiferous Ore Production,* 1911. See under Manganese.

Butcher, E. W. R.—*Some Details of Mesabi Range Mining.*—E. & M. J., Oct.26, p. 781; 700 w*; 25c.

Cayeux, L.—*Comparison entre les minerais de fer Huroniens des Etats-Unis et les minerais de fer oolithique de France;* [Comparison of the Huronian iron ores of the Lake Superior region with the oolitic ores of France; favors organic origin of U. S. ore].—Acad. d. Sci., Paris, C-R., Vol 153, 1911; pp. 1188-1190.

Choffat, P.—*Gisements de fer dans le Triassique et dans les schistes paléozoiques des régions de Pias et d'Alvayazere;* [Iron ore deposits in the Triassis and in the Paleozoic schists near Pias and Alvayazere].—Portugal Service Géol., Communications, Vol. 9, 1911, pp. 27-32; 75c.

Clapp, C. H.—*Southern Vancouver Island.* —See Copper.

Cory, Edward N.—*Raising Shaft at Rolling Mill Mine, Michigan;* [Paper read before L. S. Mg. Inst.; abstract].—Mg. & Eng. World, Nov.30,1912; p. 1003; 1500 w; 10c.

Crane, G. W.—*The Iron Ores of Missouri.* —Mo. Bur. of Geol'y & Mines, Reports, Vol. X, 2d Series; 1912; 434 pp* (book).

Dalton.—*Geology of Venezuela.*—See under Petroleum.

Davenport, L. D.—*Caving System in Chisholm District, Minn.*—E. & M. J., Sept. 7,1912; p. 437; Sept.14, p. —; 4000 w*; 40c.

Davenport, L. D.—*Canvas Ventilation Pipes.*—E. & M. J., Nov.30,1912; p. 1024; 500 w; 25c.

Delmer, A.—*La question du minerai de fer en Belgique;* [The question of iron ores in Belgium].—Annales d. Mines (Belgiq.), Vol. 17, No. 4; 1912; pp. 853-940*; 65c.

Denis, T. C.—*Annual Report, Quebec Dept. of Mines,* 1911.—See Silver.

Denis, T. C.—*Ungava.*—Canadian Mng. Jnl., July1,1912; p. 442; 2100 w*; 25c.

Diancourt, —. *Eine neue Industrie in der Lüneburger Heide;* [Revival of limonite mining in the Wietzer oil district, Germany].—Berg & Hüttenm. Rundschau, July 20,1912; p. 229; 1000 w; 35c.

Dieckmann, W.—*Die geologischen Verhältnisse der Umgebung von Melilla unter besonderer Berücksichtigung der Eisenerzlagerstätten Benni-Bu-Ifrur;* [Geology of the Melilla district, Morocco, with special reference to the Beni-Bu-Ifrur iron ore deposits].—Dresden Techn. Hochschule & Freiberg Bergakad. Dissert., 1912; 22 pp.; 11 figs.; $1.50; (Thesis).

Dixon, C.—*Improvements in the Caving System;* [Suggested economies for brown ores of Virginia].—Mines & Minerals, Aug., 1912; p. 56; 1700 w; 35c.

Dulieux, E.—*The Magnetic Sands of the North Shore of the Gulf of St. Lawrence.*— Quebec Dept. Mines Report f. 1911; 1912; pp. 135-159*; $1.

Dulieux, E.—*The Titaniferous Ores and Magnetic Sands on the North Shore of the St. Lawrence;* [Near 7-Islands Bay, Quebec].—Canadian Mng. Jnl., July1,1912; p. 450; 1100 w*; 25c.

Eckel, E. C.—*Iron Ore Reserves;* [Holdings and probable duration of principle companies in U. S. and Cuba].—Engg. Mag., Aug.,1912; pp. 665-674; 35c.

Edwards, G. E.—*Scientific Management on the Menominee Range;* [Describes the up-to-date methods of operation at the properties of the Munro Iron Mg. Co.].—

Mg. & Eng. World, Nov.23,1912; p. 917; 4000 w*; 10c.

Edwards, G. E.—*The Verona Mining Co., Palatka, Mich.*—Mining & Engg. World, Oct. 12,1912; p. 663; 3500 w*; 10c.

Edwards, G. E.—*The Crystal Falls Iron Co. Mines, Mich.*—Mining & Engg. World, Oct.19, p. 715; 4000 w*; 10c.

Edwards, G. E.—*The Loretto Mine and Surroundings, Mich.*—Mining & Engg. World, Sept.7,1912; p. 432; 1800 w*; 10c.

Edwards, G. E.—*Wickwire Mining Co.'s Property at Iron River, Mich.*—Mining & Engg. World, Oct.5,1912; p. 615; 3600 w*; 10c.

Edwards, G. E.—*Progress of Michigan Ranges; Iron River District.*—Mining & Engg. World, Aug.10,1912; p. 233; 2800 w*; 10c.

Edwards, G. E.—*Zimmerman Mine of the Spring Valley Iron Co.;* [Palatka, Mich.].—Mining & Engg. World, Aug.17,1912; p. 277; 1500 w*; 10c.

Edwards, G. E.—*Season's Development on the Marquette Iron Range.*—Mining & Engg. World, Aug.31,1912; p. 381; 3500 w*; 10c.

Elgar, J. B.—*The Iron Resources of Brazil.*—Cassier's Mag., June,1912; pp. 540-554*; 35c.

Eriksson, H.—*Eine neuzeitliche schwedische Druckluftanlage;* [A compressor plant and drilling costs in Swedish iron mining].—Glückauf, Aug.24,1912; pp. 1368-1372*; 50c.

Fettke, C. R.—*Limonite Deposits of Staten Island, N. Y.*—Columbia School of Mines Quar'y, July,1912; pp. 382-391; 65c.

Friedrich.—*Reactions in Roasting of Carbonates;* [in German].—See under Lead.

Gardner, J. H.—*Preliminary Report on the Economic Geology of the Hartford Quadrangle, Ky.;* [Chiefly coal and undeveloped iron].—Kent'y Geol. Survey, Bull. No. 20; 1912; pp. 1-25.

Gerry, A. L.—*Iron Mining on the Mesabi Range, Minn.;* [Open-pit practice on gently dipping ore bed].—E. & M. J., Oct.12, p. 693; 3200 w*; 25c.

Gow, A. M.—*Safety in Mine Operation;* [Practice of Oliver Iron Mng. Co., Minnesota].—Mex. Mng. Jnl., July,1912; p. 19; 1600 w*; 25c.

Granigg, B.—*Die lappländischen Eisenerzlagerstätten von Kiruna und Gellivare;* [The iron ore deposits of Kiruna and Gellivare, Swedish Lappland].—Montanist. Rundschau, Sept.1,1912; p. 845; Sept.16; 7000 w*; 75c.

Greene, R. S.—*Chinese Iron and Steel Industry;* [Han-yeh-ping Iron & Coal Co., Ltd., developments in 1911].—U. S. Consul. Rep., Aug.3,1912; p. 619; 250 w; 20c.

Grimshaw, R.—*Prüfen von Eisenerz Briketts;* [Testing of iron-ore briquets].—Centralbl. d. Hütten & Walzwerke, July5,1912; p. 353; 300 w; 35c.

Grosch, P.—*Roteisensteinlager in Asturien;* [Geology and genesis of the red hematites of the Asturias, Spain].—Zts. f. prakt. Geol., May,1912; p. 201; 2000 w*; 75c.

Hamilton, J. W. H.—*Developments in the Preparation of Iron Ores.*—[Paper read before Am. Ir. & Steel Inst.; abstract].—Ir. Tr. Rev., Nov.28,1912; p. 1013; 7500 w; 25c.

Hamilton, J. W. H.—*Progress in the Preparation of Iron Ores;* [Crushing, concentration, beneficiating, roasting and agglomeration; read to Amer. Iron & Steel Inst.]. Iron Age, Oct.31, p. 1036; 7500 w; 30c.

Hamm, T. C.—*Progress in Durango.*—Mex. Mng. Jnl., Oct., p. 27; 1600 w; 25c.

Harrington, C. L.—*Mineral Resources of South America.*—See under Copper.

Heyer, W.—*Zur Bewertung von Eisenerzen;* [The valuation of iron ores].—Techn. Blätter, Oct.26, p. 337; 1600 w; 35c.

Heyer, W.—*Das Rösten von Eisenerzen;* [The roasting of iron ores].—Techn. Blätter, Aug.31,1912; p. 274; 2000 w*; 35c.

Hoffman, F. L.—*Mining Casualties in Newfoundland;* [Statistics, mortality rate; chiefly iron mining].—E. & M. J., July20, 1912; p. 126; 3200 w; 25c.

Hore, Reginald E.—*Iron Formation in Temagami District, Ontario.*—Mg. & Eng. World, Dec.7,1912; p. 1040; 1000 w*; 10c.

Jarvis, R. P.—*The Valley and Mountain Iron Ores of East Tennessee.*—Resources of Tenn., Sept.,1912; pp. 326-368*; 50c.

Jenkins, D.—*Iron Ore Supply in Southern Sweden.*—U. S. Consul. Rep., Oct.30, p. 554; 500 w; 20c.

Jennings, E. P.—*A Titaniferous Iron-Ore Deposit in Boulder County, Colo.*—Amer. Inst. Mng. Engrs., Bull. 70, Oct.,1912; pp. 1045-1057*.

Jordon, F. A.—*Moose Mountain Iron Mine, Canada.*—Can. Mg. Jnl., Dec.1,1912; p. 807; 5000 w; 30c.

Kennedy, T.—*Caving System in the Chisholm District, Mesabi Range, Minn.*—E. & M. J., Oct.26, p. 775; 1200 w*; 25c.

Kornatzki, M. von.—*Karte der Eisen- und Kohlenindustrie in Südwestdeutschland;* [Map of the iron and coal mines and iron and coal industries of southwest Germany and vicinity].—Charlottenburg; text, and map on scale of 1:125,000; $2.

Kreuzkam, Dr.—*Die südrussische Eisenerz-industrie und die Eisenerzausfuhr nach Deutschland;* [The South Russia iron-ore industry and exports to Germany].—Kali Erz & Kohle, Sept.25,1912; p. 961; 1000 w; 35c.

Kreuzkam, Dr.—*Aus der luxemburgischen Montanindustrie;* [Review of iron ore production in Luxemburg].—Kali Erz & Kohle, Oct.5, p. —; 1000 w; 35c.

Lauck, W. J.—*The Iron-Ore Miner of Northern Michigan.*—Coal & Coke Op., Sept.12,1912; p. 165; 3200 w; 25c.

Laur, F.—*Les trois nouvelles concessions de fer en Lorraine;* [The three new iron-ore concessions in the Briey basin; Mercy-le-Haut, Audun-le-Roman, and Norroy-le-Sec].—Echo d. Mines, June10,1912; p. 678; 1000 w; 35c.

Lazurtegui, —. *La question du minerai de fer;* [The iron-ore problem; imports and exports of various countries].—Rev. Economiq., Aug.15,1912; pp. 211-262*; 75c.

Leach, W. W.—*Geology of Blairmore Map Area, Alberta;* [Coal, iron and cement].—Canada Geol. Survey, Rep. f. 1911; pp. 192-201*.

Leprince-Ringuet, A. F. — *L'industrie minérale en Meurthe-et-Moselle en* 1911: [Official report on the mining industry (iron) in Meurthe-et-Moselle, France, 1911]. Rev. Noire, Sept.15,1912; p. 427; Sept.29, p. —; 2500 w; 50c.

Lindemann, E.—*Calabogie Iron-Bearing District, Renfrew County, Ont.*—Canada Dept. Mines, Mines Branch, Rep. f. 1911; p. 101-103*; $1.

Lindemann, E.—*The Iron Deposits Along the Central Ontario Ry.*—Canada Dept. Mines, Mines Branch, Rep. f. 1911; 1912; p. 95-100.

Louis, H.—*The Magnetic Concentration of Iron Ores;* [Reviews modern processes and principles; read to W. of Scotland Iron & Steel Inst.; abstract].—Iron & Coal Trades Rev., May24,1912; p. 836; 5000 w*; 35c.

Lowe, E. N.—*Iron Ores of Marshall and Benton Counties.*—Mississippi Geol. Survey, Publication; 1912; 24 pp; 50c.

Mackenzie, G. C.—*Ore Dressing and Metallurgical Laboratory, Canada Dept. of Mines;* [Magnetic concentration tests on magnetites and on copper-nickel ore].—Canada Dept. Mines, Mines Branch, Rep. f. 1911; pp. 58-83*.

Martell, P.—*Eisenerzbergbau in Frankreich;* [Iron ores and iron-ore mining in France].—Bergbau, Aug.22,1912; p. 481; 2000 w; 35c.

McBride.—*British Columbia Mines Report for* 1911.—See under Zinc.

McCallie, S. W.—*The Ocher Deposits of Georgia.*—Mines & Minerals, Aug.,1912; p. 46; 1000 w*; 35c.

McDonald, P. B.—*History of the Cascade Iron Range, Mich.*—Mg. & Eng. World, Nov.16,1912; p. 902; 4000 w*; 10c.

McDonald, P. B.—*Use of Sludge Boxes for Diamond Drills.*—Mg. & Eng. World, Nov.23,1912; p. 954; 1200 w*; 10c.

McDonald, P. B.—*The Iron Ranges of Michigan;* [Recent developments].—M. & S. P., June22,1912; p. 858; 1000 w*; 20c.

McDonald, P. B.—*Rolling Mill Mine, No. 2 Shaft, Negaunee, Mich.*—E. & M. J., June 22,1912; p. 1237; 1500 w*; 25c.

Meuthen, A.—*Kalorimetrische Untersuchung des Systems Eisen-Kohlenstoff;* [Calorimetric investigation of the iron-carbon system].—Ferrum, Oct.8,1912; p. 1; 9000 w*; 75c.

Miron, F.—*Gisements de minerais de fer de la Strandja, frontière turco-bulgare;* [The iron-ore deposits of Strandja on the Turko-Bulgarian frontier]. — Genie Civil, Sept.28,1912; 3000 w*; 35c.

Molden, R. J.—*Southern Piedmont Iron Operations;* [Developments near Lynchburg, Va.].—E. & M. J., Aug.24,1912; p. 345; 500 w; 25c.

Müller, C.—*Die Erzlagerstätten von Traversella im Piemont, Italien;* [Geology of the magnetite and pyrite mines and ore bodies at Traversella, Piedmont, Italy].—Zts. f. prakt. Geol., June,1912; pp. 209-240*; 75c.

Nason, F. L.—*The Bearing of the Theories of the Origin of Magnetic Iron Ores on Their Possible Extent.*—Amer. Inst. Mng. Engrs., Bull. 67, July,1912; pp. *95-709; $1.15.

Nicholl, J. S.—*Removing Moisture from Iron Ore;* [Test of rotary dryer at Buttsville, N. J.].—Mines & Minerals, July,1912; p. 734; 500 w; 35c.

Norton, E. J.—*Mines in Southern Spain.*—U. S. Consul. Rep., Aug.29,1912; p. 1086; 300 w; 20c.

Olmsted, Geo. M.—*Iron Ore Washing Calculations.*—E. & M. J., Dec.7,1912; p. 1071; 100 w*; 25c.

Olmstead, G. C.—*Curves Used in Connection with an Ore-Drying Plant;* [Brunt iron mine, Mich.].—Mining & Engg. World, Sept. 14,1912; p. 484; 300 w*; 10c.

d'Ossat, G. de Angelis.—*Giacimento ferro-manganesifero presso S. Pietro, Fabro, Umbria;* [Manganiferous iron ore deposits near S. Pietro, Umbria, Italy].—Rassegna Mineraria, June11,1912; p. 325; 1200 w; 35c.

Parsons, W. F. C, and E. M. Archbald.—*Development of the Bathurst Iron Deposit by the Canada Iron Corp., Ltd.;* [Mining, crushing and concentration plant, Gloucester county, N. S.].—Canadian Mng. Jnl., Oct.1,1912; p. 686; Oct.15, p. 686; 2500 w*; 40c.

Pawlowski, —. *L'avenir des mines de fer des Pyrenées;* [The future of iron mining in the French Pyrenees].—Echo d. Mines, July 1,1912; p. 771; 1000 w; 35c.

Pawlowski, A.—*L'industrie minière en Lorraine annexée;* [History of the mining industries in Lorraine].—Soc. Amicale Ecole Douai, Bull., Aug.10,1912; p. 549-552; Aug.25; pp. 559-564; 50c.

Péchadre, M.—*Mining in France;* [Abstract of report of budget committee of French Chamber on mineral wealth; coal and lignite; iron ore; gold].—M. & S. P., July13,1912; p. 44; 750 w; 20c.

Phalen, W. C.—*Production of Chromic Iron Ore in* 1911; [California; also notes on deposits in Rhodesia, New Caledonia and Macedonia].—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 10 pp; 10c.

Purdue, A. H.—*The Iron Industry of Lawrence and Wayne Counties.*—"Resources of Tennessee," Oct.,1912; pp. 370-388*; 35c.

Rubio y Munoz.—*Geology of Guelaya, Morocco;* [Spanish].—See under Lead.

Rzehulka, A.—*Der erzführende Muschelkalk in Oberschlesien und den benachbarten Gebieten;* [The ore-bearing shell-limestone in Upper Silesia and the neighboring regions].—Erzbergbau, Dec.1,1912; p. 368; 1100 w; 35c.

Singewald, J. T., Jr.—*The Iron Ore Deposits of the Cebolla District, Colorado;* [Gunnison County; titaniferous magnetite].—Economic Geol'y, Sept.,1912; pp. 560-573*; 65c.

Simmersbach, Br.—*Die Eisensteingewinnung der Welt;* [World's iron-ore production; (1) Germany-Luxemburg, Austria-Hungary, France; (2) France, Belgium, England; (3) Sweden, Russia, U. S., Spain, Canada, Cuba, Algiers, Italy, Greece].—Kohle & Erz, July8,1912; p. 698; (2) July 15, p. 722; (3) July29, p. 777; 10,000 w; 75c.

Stoltz, G. C.—*Development Methods at Mineville, N. Y.*—E. & M. J., Oct.26, p. 792; 2500 w*; 25c.

Streeter, R. L.—*Power Machinery of the Steel Industry;* [iron-ore mining; describes various hoists and use of compressed air].—Engg. Mag., Aug.,1912; pp. 681-698*; 35c.

Svimonoff.—*Russia's Principal Mines and Oil Wells.*—See under Gold.

Symons, B.—*The Bell Island Iron Mines, Newfoundland.*—Mng. Jnl., Oct.26, p. 1051; 1500 w; 35c.

Taylor, C. F. and W. M. Booth.—*The Ontario Iron Mine, N. Y.*—E. & M. J., Nov. 9, p. 893; 2100 w*; 25c.

Thomas, K.—*Mexican Iron and the Panama Canal.*—Mex. Mng. Jnl., Nov.,1912; p. 18; 600 w; 25c.

Thomas, K.—*The Cuyuna Iron Range.*—M. & S. P., July13,1912; p. 52; 800 w; 20c.

Tupper, C. A.—*Construction of Permanent Ore-Loading Docks;* [Review of the docking facilities in the Lakes region].—Mining & Engg. World, Aug.3,1912; p. 185; Aug.10, p. —; 5000 w*; 20c.

Tupper, C. A.—*Ore Transporting on Island of Elba;* [Cableways, unloading and docking facilities].—Iron Age, June20,1912; p. 1510; 1500 w*; 30c.

Tupper, C. A.—*Conveying Ore to Vessels on Inaccessible Coasts;* [Cableways, crane, etc., installation, chiefly for loading iron in Cuba, Elba and Spain].—Mining & Engg. World, July20,1912; p. 93; 4000 w*; 10c.

Tupper, C. A.—*Ore-Washing Plant of the Wisconsin Steel Co.*—Mining & Engg. World, July13,1912; p. 49; 2400 w*; 10c.

Ungeheuer, —. *Die wirtschaftliche Bedeutung der ostfranzösischen Erz- und Eisenindustrie;* [The industrial significance of the iron-ore and steel industries of eastern France and their future possibilities].—Technik & Wirtschaft, Oct.,1912; pp. 649-660*; 50c.

Vaccaro, V.—*Le miniere di Cogne;* [The iron ores of Cogne, Italy].—Rassegna Mineraria, Aug.11,1912; p. 77; 1200 w; 45c.

Ver. f. die bergbaulichen Interessen Elsass-Lothringen.—*Jahresbericht,* 1911; [Extracts from report for 1911 of Alsace-Lorraine Mines Association on iron ore production and developments].—Deu. Bergwerks Ztg., July12,1912; p. 1; 1000 w; 35c.

Villaron, J. R.—*Informe acerca de la Naturaleza de los minerales de hierra de Mayari;* [Origin of the Mayari iron ores from lateritization of serpentine].—Soc. Uhana de Ing., Rev.; Vol. 4, 1912; pp. 31-47.

Vinassa de Regny, P.—*Lybia Italica;* [Italian Lybia, Tripolitania; agricultural and mineral resources; chiefly zinc, iron ore, phosphate and sulphur].—Milan, 1912; 214 pp*; $2.50 (book).

Abstract in Rassegna Mineraria, Sept.1, p. 120; 1000 w; 35c.

Voetter, T. W. and W. D. Henderson.—*Venezuelan Iron Ore Deposits;* [Imataca mines].—U. S. Consul. Rep., June28,1912; p. 1400; 600 w; 20c.

Vogt, Prof.—*The Grangesberg Iron Deposits;* [From "Teknisk Ugeblad"].—Iron & Coal Trades Rev., Aug.30,1912; p. 315; 500 w; 35c.

Wagener, A.—*Bedeutung und Entwickelung des Erzbergbaues im Minettegebiet;* [Significance and development of iron-ore mining in the minette districts of German and French Lorraine].—Bergbau, June13, 1912; p. 333; 3000 w; tables; 35c.

Walker, Wm. H., and Patrick, Walter A.—*The Determination of Oxygen in Iron and Steel by Reduction in an Electric Vacuum Furnace;* [Paper read before Int. Cong. Appl. Chem.].—Jnl. Ind. & Eng. Chem., Nov.,1912; p. 799; 2800 w*; 75c.

Wattier, C.—*The Iron Ore Resources of Chile, with a Note on the Corral Iron Works.*—Iron & Steel Inst., Jnl.; Sept., 1912; 45 pp.*; 50c. Abstract in Iron & Coal Trades Rev., Oct.4, p. 521; 500 w; 45c.

Weiss, Pierre.—*Researches on Magnetization at Very Low Temperatures.*—Tr. Faraday Soc., Oct.,1912; 3 p.*; 75c.

Weisskopf, Al.—*Fortschritte in der Brikettierung von Eisenerzen;* [Progress in briquetting iron ores; read to Allgm. Bergmannstag, Vienna, Sept., 1912; abstract].—Montanist. Rundschau, Sept.15,1912; p. 957; 1800 w; 50c.

Weld, C. M.—*The Ta-yeh Iron Ore Deposits, Hu-Pei Province, China.* — Amer. Inst. Mng. Engrs., Bull. 70, Oct.,1912; pp. 1059-1070*; $1.15.

Wendeborn, B. A.—*Die Kupfererz- und Limonit-Lagerstätten von Majdan-Pek in Serbien;* [The copper-bearing quartz-andesite dike and buried residual limonite deposits of Majdan-Pek, Servia].—Zts. f. prakt. Geologie, July,1912; p. 276-280*; 75c.

West, J. G.—*The West Sintering Process;* [Chiefly for iron-ore fines].—E. & M. J., Sept.7,1912; p. 459; 800 w*; 25c.

Whinery, S.—*Clinton Iron-Ore Deposits in Kentucky and Tennessee.*—Amer. Inst. Mng. Engrs., Bull. 70, Oct.,1912; p. 1057; 500 w; $1.15.

White, A. G.—*Notes on the Zomelahuacan Mining District, State of Vera Cruz (Mexico).*—Informes y Memorias del Instituto de Minas y Metalurgia, Vol. 3, No. 1, 1912-1913, p. 49; 1600 w; 50c.

Winchell, H. V.—*Kirunavaara;* [Describes these Swedish Lappland ores].—M. & S. P., July20,1912; p. 82; 1200 w; 50c.

Wittich, L. L.—*Iron Mining in Missouri.*—Mines & Minerals, Nov., p. 227; 1500 w*; 35c.

Wooton, P.—*Future Possibilities of Mississippi Iron Ore.*—Mining & Engg. World, Aug.24,1912; p. 327; 1000 w; 10c.

Wooton, P.—*Production of Iron and Other Minerals in Alabama.*—Mining & Engg. World, Sept.14,1912; p. 489; 1400 w; 10c.

Ver. f. d. Bergbaulichen Interessen Elsass-Lothringen.—*Jahresbericht für das Jahr* 1911; [Iron-ore mining statistics and accidents in Lorraine-Luxemburg, 1911].—Glückauf, Aug.24,1912; pp. 1374-1379; 50c.

Comité Central des Houillères de France.—*Annuaire, Tome* 18; [18th Yearbook of the coal and iron mines of France].—Paris, 1912 (book).

———. *A New Penna. R. R. Power Plant;* [Iron-ore unloading at Cleveland, Onio, from lake steamers; power plant].—Iron Age, Aug.29,1912; p. 443; 2500 w*; 30c. Also in Iron Trade Rev., Aug.29, p. 401; 1000 w*; 20c.

———. *A Permanent Steel Stockpile Trestle for Ore;* [at Negaunee mine of Cleveland Cliffs Iron Co., Mich].—Iron Trade Rev., July11,1912; p. 79; 1200 w*; 20c.

———. *Antigonish Iron Ore Deposits in Nova Scotia.*—Iron Trade Rev., July4,1912; p. 33; 1500 w*; 20c.

———. *Austrian Mines.*—Mg. Jnl. (London), Nov.16,1912; p. 1115; 2000 w; 35c.

———. *Bergbau und Reform der direkten Steueren in Elsass-Lothringen;* [Iron mining and reform of direct taxation in Lorraine].—Deu Bergwerks Ztg., July13, 1912; p. 1; 1500 w; 35c.

———. *Caves in the Iron River District, Michigan.*—E. & M. J., Aug.3,1912; p. 209; 500 w; 25c.

———. *Cayuna Iron Ores, Minnesota.*—E. & M. J., June29,1912; p. 1284; 750 w; 25c.

———. *Decline in Iron Content of Lake Superior Ores.*—Iron Trade Rev., Nov.7, p. 863; 1200 w; 20c.

———. *Deutsche Interessen am schwedischen Erzbergbau;* [German interests in Swedish iron-mining]. — Centralbl. d. Hütten- & Walzwerke, Pct. 25; p. 565; 500 w; 35c.

———. *Die Eisenerze Frankreichs;* [The iron ores of France].—Erzbergbau, Sept.15, 1912; p. 292; Oct. 1, p. —; 1200 w; 50c.

———. *Die Eisenerze Frankreichs;* [The iron ores of France].—Erzbergbau, Sept.

15, p. 292; Oct.1, p. 307; Oct.15, p. 322; Nov.1, p. 340; Nov.15, p. —; 6000 w; 95c.

———. *Die Ergebnisse der Produktionserhebungen in Erzbergbaubetrieben für die Jahre, 1909, und 1910*; [Statistics of iron-ore production in Germany by districts and grades for 1909 and 1910].—Erzbergbau, June1,1912; p. 189; 1000 w; tables; 35c.

———. *Die Eisenerze im westen Frankreichs;* [Iron ores of western France].—Erzbergbau, Aug.15, p. 259; Sept.1, p. 274; 4200 w; 45c.

———. *Die Eisenerzberge Lapplands;* [Iron ore mining in Lappland].—Erzbergbau, Aug.15,1912; p. 261; 800 w*; 35c.

———. *Die Entwickelung und Bedeutung des Minette Erzbergbaues;* [Development and significance of the minette ore production of Lorraine].—Erzbergbau, Aug.1, 1912; p. 244; 1600 w; 35c.

———. *Die südrussische Eisenerzindustrie;* [The South Russian iron-ore industry in 1911].—Berg- & Hüttenm. Rundschau, Oct.5, p. 8; 750 w; 35c.

———. *Ein Studienausflug ins luxemburgisch-lothringische Eisenrevier;* [Student trip to the Luxemburg-Lorraine iron mines].—SW. Deu. Industrie Ztg., Oct.26, p. 629; 1800 w; 35c.

———. *Eisenerzlagerstätten Russlands;* Iron ore deposits and resources of Russia].—Stahl & Eisen, June13,1912; 3 pp.; 75c.

———. *Eizen- und Manganerze im Brasilien;* [Iron and manganese ores of Brazil].—Riga Industrie Ztg., May15,1912; p. 139; 500 w; 35c.

———. *Eisenerzlager in Südvaranger;* [Iron ore deposits of Südvaranger].—Kohle & Erz, Aug.26, p. 878; 800 w; 35c.

———. *Iron Ore Concentration in Minnesota;* [Describes various plants].—Met. & Chemi. Engg., Nov.,1912; p. 717; 2000 w*; 35c.

———. *Iron Ore Mining in Crystal Falls District, Mich.*—E. & M. J., Aug.31, 1912; p. 402; 400 w; 25c.

———. *Kusnezk district, Altai;* [in German].—Riga Industrie Ztg., May15, p. 138; 600 w; 35c.

———. *Les mines de fer de l'Est;* [Iron mining in Est dept. France, 1911; from official report].—Echo d. Mines, Sept.26, 1912; p. 1002; 1500 w; 35c.

———. *Marquette Iron Range Continued Progress.*—Mg. & Eng. World, Dec.7, 1912; p. 1031; 4000 w*; 10c.

———. *Minerals of Primorsk Province, Russia.*—Mining & Engg. World, Aug.31, 1912; p. 387; 1200 w; 10c.

———. *Mines and Mining in Japan.*—Japan Yearbook, 1912; pp. 318-332.

———. *Mines and Mining in China.*—China Yearbook, 1912; pp. 50-54.

———. *New Developments in the Lake Iron Ore District;* [1st semester, 1912].—Iron Trade Rev., July18,1912; p. 111; 7000 w*; 20c.

———. *Mining Marquette Ores;* [Output and costs, 1906-1910].—E. & M. J., Nov.9, p. 885; 700 w; 25c.

———. *Ore Handling Bridge in Cuba:* [Cuban RR. cantilever coal and iron handling bridge at Antilla docks].—Iron Trade Rev., July25,1912; p. 170; 800 w*; 25c.

———. *Ore Unloading Plant on a Curved Dock;* [Describes the B. & O. plant at Lorain, O., built by Brown Hoisting Machinery Co.].—Ir. Age, Nov.28,1912; p. 1258; 2000 w*; 25c.

———. *Plants for Washing Lean Iron Ores;* [Describes several plants in Superior districts].—Engg. News Sept.5,1912; p. 449; 1000 w; 25c.

———. *Power Plant of Ore Washery.*—Ir. Age, Nov.21,1912; p. 1206; 1000 w*; 30c.

———. *Schwedens Bergbau und Eisenindustrie im Jahre* 1911; [Sweden's mining and iron industry in 1911].—Glückauf, Nov. 16,1912; p. 1886; 3000 w; 50c.

———. *Spanische Montanindustrie;* [Spanish production of iron ore, 1890-1910].—Techn. Blätter, Aug.31,1912; p. 275; 600 w; tables; 35c.

———. *South Wales Coal and Iron Companies,* 1912; *7th Edition.*—Cardiff, 1912; $2.50 (book).

———. *The 50,000-ton Ore Dock at Marquette.*—Engg. Record, July6,1912; p. 4; 2500 w*; 20c.

———. *The Iron Ore Mines of Cogne, Valley of Aosta, and a Projected Electric Pig-Iron Plant.*—Met. & Chemi. Engg., Nov., 1912; p. 744; 600 w; 35c.

———. *The New Mastodon Iron Mine;* [and other mines in Menominee and Marquette ranges; recent developments].—Iron Age, Aug.22,1912; p. 415; 800 w; 30c.

———. *The Salangen Iron Mines in Norway;* [Reported failure].—Iron & Coal Trades Rev., June28,1912; p. 1035; 500 w; 35c.

———. *The World's Iron Ore Reserves;* [with special reference to Norway's concentratable ores].—Mng. Jnl., Nov. 9, p. 1087; 2000 w; 35c.

———. *Torbrook Iron Deposits;* [Torbrook, N. S., mines and concentrating mill].—Canadian Mng. Jnl., Sept.15,1912; p. 637; 3500 w*; 35c.

———. *Tremendous Tonnages of Low-Grade Iron Ores;* [in Republic and neighboring districts, Mich.].—Iron Trade Rev., July11,1912; p. 88; 1200 w; 20c.

———. *Ups and Downs of Lake Superior Ore Prices.*—Ir. Tr. Rev., Nov.28,1912; p. 1026; 2500 w*; 25c.

———. *Utilization of Electric Power for Iron Mining;* [Cleveland Cliffs electrification on Marquette range, Lake Superior; 1: Carp River hydro-electric plant; 2: Electric hoisting and air compression].—Iron Trade Rev., July25,1912; p. 157; Aug.1, p. 203; 6000 w*; 45c.

———. Vom norwegischen Erzbergbau; [The Sydvaranger iron mines].—Erzbergbau, Nov.1, p. 339; 1000 w; 35c.

———. *What the Lake Superior Mining Region has Produced;* [Its part in the development of the modern iron, copper and electrical industries, with output and values for each range, annually, 1845-1912].—Mining & Engg. World, Aug.24,1912; p. 323-328; 2000 w; tables; 10c.

———. *Woodbury Slime Classifying Jig for Iron Ore.*—Iron Trade Rev., Sept.26, 1912; p. 588; 1500 w*; 20c.

———. *Zur Brikettierung von Eisenerzen;* [Humboldt system and developments in iron ore briketting and use of briketts].—Erzbergbau, July15,1912; p. 233; 1500 w; 35c.

Iron and Steel.

von der Aa, —. *Steinkohle, Braunkohle, Eisenerz und Eisenindustrie;* [Teubner's Monographs of Commercial Geography of Germany; Vol. II: The hard-coal, lignite, iron-ore and siderurgic industries].—Leip-

zig and Berlin, 1912; Map and explanatory text; $2.

Blosfeld, P., and others.—*Geschichte der Industrie Rigas;* [Industrial history of Riga, Russia; No. 3: Iron and steel, machinery, metals, electrotechnique, etc.].—Riga, 1912; 98 pp*; 75c.

Cook, H. H. (Amer. Iron & Steel Inst.)—*First Statistical Report; Steel Production in U. S., 1st semester,* 1912.—Iron Trade Rev., Sept.5,1912; p. 454; 2100 w; tables; 20c. Also in Iron Age, Sept.5, p. 532; 2000 w; tables; 30c.

Day, W. A.— *The Development of the American Steel Industry;* [Economic development of iron ore mining and handling and steel manufacture].—Cassier's Mag., Sept., 1912; pp. 216-223*; 35c.

Demorest, D. J.—*The Determination of Chromium and Vanadium in Steel.*—Jnl. Ind. & Eng. Chem., Dec.,1912; p. 895; 750 w; 75c.

Dupreyrat, J. C.—*The Russian Iron and Steel Syndicate.*—Iron & Coal Trades Rev., Aug.16,1912; p. 237; 1000 w; 35c.

Franck, C.—*Kompounddraht aus Eisen und Kupfer;* [Copper-clad iron wire].—Centralbl. d. Hütten & Walzwerke, Aug.25, 1912; p. 451; 700 w; 35c.

Ganz, A. F.—*Electrolytic Corrosion of Iron in Street Soils.*—Amer. Inst. Electr. Engrs., Proc.; June,1912; pp. 1001-1010*; $1.15.

Hartman, A.; J. W. Richards.—*Steel;* [Discusses nomenclature of iron and steel].—Met. & Chemi. Engg., July,1912; p. 391; 1000 w; 35c.

Hedley.—*Br. Columbia.*—See under Copper.

Heym, W.—*Die Herstellung weicher Stahlgussstücke;* [Production of mild steel castings].—Kali Erz & Kohle, Aug.25,1912, p. 844; 500 w; 35c.

Hibbard, Henry D.—*The Solid Non-Metallic Impurities in Steel;* [Paper read before Int. Cong. Test. Materials].—Ir. Tr. Rev., Nov.21,1912; p. 971; 4000 w; 25c.

Hillringhaus, A.—*Zur wirtschaftlichen Entwicklung des Eisengiessereigewerbes in Oesterreich-Ungarn;* [Industrial development of the iron foundry business in Austria].—Giesserei Ztg., Oct.1, p. 608; 1200 w; 35c.

Hilpert, S., and W. Mathesius.—*The Magnetic Properties of Manganese and Nickel Steels;* [As affected by heat treatment].—Iron & Steel Inst., Jnl.; Sept.,1912; 11 pp.*; 50c. Abstract in Iron & Coal Trades Rev., Oct.4, p. 515; 2000 w*; 45c.

Hulet, J.—*Album général des aciers et fers profilés français; Barèmes;* [General album and ready reckoners for French steels and profile irons].—Paris, 1912; 524 pp*; $4 (book).

Hunt, R. W.—*How to Insure Soundness in Steel Rails.*—Internatnl. Asso. f. Testg. Materials, Vol. II, No. 13, 1912; 11 pp*; 95c. Abstract in Iron Trade Rev., Sept.5, 1912; p. 439; 2100 w*; 20c. Also in Iron Age, Sept.5, p. 505; 2500 w*; 30c.

Job, R.—*Some Defective Rails and How to Avoid Them;* [Read to Internatnl. Asso. f. Testg. Materials, N. Y.].—Iron Trade Rev., Sept.12,1912; p. 503; 2100 w; 20c.

Kershaw, John B. C.—*Electric Furnace Methods of Steel Production* (fifth article).—Ir. Tr. Rev., Dec.5,1912; p. 1067; 4000 w*; 25c.

Kershaw, John B. C.—*Electric Furnace Methods of Steel Production.*—Ir. Tr. Rev., Nov. 21 and 28,1912; 9000 w*; 50c.

Koepper, G.—*In Schacht und Hütte; Die Industrie des Ruhrkohlenbezirkes;* ["In Shaft and Smelter"; industries of the Ruhr coal mining region, Prussia].—Reutlingen, 1912; 647 pp.; 350 figs.; $7.50 (book).

Kr—, Dr.—*Montanindustrie und Weltwirtschaft;* [Germany's position in the international iron and steel trades; her imports and exports of ore, pig iron and steels].—Centralbl. d. Hütten & Walzwerke, June25,1912; p. 329; 3000 w; 35c.

Leeuer, G. de.—*Cenni sulla organisazione dell'industria siderurgica nel Belgio;* [The syndicate organization of the iron and steel industry of Belgium; notes from de Leener's book (in French) on The Industrial Syndicates of Belgium].—Met. Italiana, Sept.,1912; p. 577; 3000 w; 45c.

Leisse, W.—*Wandlungen in der Organisation der Eisenindustrie und des Eisenhandel;* [Tendencies in the iron and steel industries toward world syndicate; extract from Leisse's book of above title].—Deu. Bergwerks Ztg., June5,1912; p. 1; 1500 w; 35c.

Letouzé, G.—*Un Neuvel Acier: l'Acier Exothermique;* [A new steel: exothermic steel].—Revue Industrielle, Nov.23,1912; p. 16; 1500 w; 25c.

Lux, —. *Kokserstellung und Hochofenbetrieb im innern Chinas;* [The first coke plant and blast-furnace in interior China].—Stahl & Eisen, Aug.22,1912; pp. 1401-1407*; 75c.

Massarelli, F.—*La giornata di lavoro nelle industrie a fuoco continuo;* [The working day in industries of continuous operation].—Met. Italiana, June30,1912; pp. 389-397; 50c.

Nau, J. B.—*Defects in Steel Ingots and Steel Rails.*—Iron Age, Aug.22,1912; p. 398; 2500 w*; 30c.

Paul, F. W.—*Manufacture of Open-Hearth Steel with Reference to Improvement in Yield;* [Paper read before Ir. & St. Inst., Leeds].—Engg. (London), Nov.29, 1912; p. 760; 3000 w; 35c.

Plummer, J. H.—*Iron and Steel in Nova Scotia.*—Canadian Mng. Jnl., Sept.15,1912; p. 605; 4000 w; 25c.

du Poizat, C.—*Notre commerce extérieur en combustibles et fers;* [Imports and exports of coal, coke, briquets, iron and steel 1st half-year 1911 in France].—Echo d. Mines, Aug.8,1912; p. 882; 600 w; 35c.

Ponthière, H.—*Etat actuel de la sidérurgie en Italie;* [Present status of siderurgy in Italy].—Annales d. Mines Belgiq., Vol. 17, No. 3; 1912; pp. 791-801; 90c.

Rieger, —. *Die Kärntnerische Eisenindustrie, mit besonderer Berücksichtigung der Waidischer Eisenwerke;* [The decadent iron and steel industries of Carinthia, with special reference to the Waidi steel works and blast furnaces, the last survivor].—Oestr. Zts. f. Berg- & H-wesen, Aug.31, p. —; Sept.21, pp. 544-546; Sept.28, pp. 557-559; Oct.5, pp. 571-573; Oct.12, pp. 589-591; Oct.19, pp. —; $2.

von Riepel, A. and H. M. Howe.—*International Specifications for Iron and Steel;* [Report of committees 1 and 24].—Internatnl. Asso. f. Testg. Materials, Vol. II, No. 13; 1912; 32 pp; 95c. Abstract in Iron Age, Sept.5, p. 518; 10,000 w; 30c. Also in Iron Trade Rev., Sept.5, p. 446; 1500 w; 20c.

Robin, F.—*Variations sonores des aciers en fonction de leur température;* [Variations in sounding tones of steels as a function of their temperature].—Rev. d. Métallurgie, June,1912; pp. 413-470*; $1.15.

Roer, —. *Deutsche Hüttenwerke in der Normandie;* [Thyssen and the German interests in the iron and steel industry of Normandie, France].—Deu. Bergwerks Ztg., June8,1912; p. 3 of section 4; 1200 w; 35c.

Schäfer, Rud.—*Die Eisenindustrie Chinas;* [The iron and steel industry of China].—SW. Deu. Industrie Ztg., Sept.21,1912; p. 547; 1200 w; 35c.

Smith, J. Cruickshank.—*Selecting and Specifying Protective Coats for Iron and Steel.*—Eng. Mag., Dec.,1912; 3500 w; 35c.

Snow, J. P.—*Features of the American Rail Situation;* [Manufacturing problems and solutions; read to Internatnl. Asso. f. Testg. Materials, N. Y.].—Iron Trade Rev., Sept.5,1912; p. 437; 2800 w; 20c. Also in Iron Age, Sept.5, p. 526; 2500 w; 30c.

Steelman, Joseph.—*Recent Developments in Heat Treatment of Steel.*—Mex. Mg. Jnl., Dec.,1912; p. 25; 3000 w; 25c.

Streeter, Robert L.—*Steel Plant Electrical Installations.*—Eng. Mag., Dec.,1912; p. 362; 6000 w*; 35c.

Swank, J. M. (Amer. Iron & Steel Asso.). —*Statistics of the American and Foreign Iron Trades,* 1911, *Part* 1.—Philadelphia, 1912; 104 pp.; $5 (for both parts).

Sweetser, R. H.—*The Proper Method of Blowing-in a Blast Furnace;* [Paper read before Am. Inst. Mg. Eng.; abstract].—Mg. & Eng. World, Nov.30,1912; p. 999; 2000 w; 10c.

Van Norden, Rudolph W.—*Electric Iron Smelter at Heroult.*—Jnl. Elec., Nov.23, 1912; p. 453; 4000 w*; 40c.

West, T. D.—*Mystery vs. Chemistry in Grading Pig Metal;* [Advocates grading by analysis instead of fracture]. — Amer. Foundrym. Asso., Proc. f. 1912; pp. 127; 1200 w; 65c.

Wickhorst, M. H.—*Research Work on Rails;* [Read to Internatnl. Asso. f. Testg. Materials].—Engg Record, Sept.14,1912; p. 298; 1600 w; 20c.

Williams, A. D.—*Gas Engines at the Central Plant;* [Describes the plant of the Am. Steel & Wire Co. at Cleveland].—Power, Dec.3,1912; p. 825; 2000 w*; 20c.

Wittorf, M.—*Recherches sur les alliages de fer et carbone;* [Memoir on the alloys of iron with carbon].—Acad. d' Artillerie, St. Peterburg; Publication; 1911; 78 pp.; 47 figs. Abstract in Rev. de Métallurgie, Aug., 1912; pp. 600-617*; $1.15.

Amer. Iron & Steel Asso.—*Iron and Steel Statistics for* 1911; [Abstract].—Iron Age, July18,1912; p. 132; 3000 w; tables. 30c.

Amer. Iron & Steel Asso.—*Pig-Iron Production, 1st Half-Year,* 1912.—Iron Age, Aug.1,1912; pp. 254-255; 1000 w; tables; 30c. Also in Iron Trade Rev., Aug.1, p. 225; charts; 20c.

———. *American Steel Contracts and Profits.*—Iron & Coal Trades Rev., Nov.1, p. 722; 800 w; 35c.

———. *Belgian Iron & Steel Industries in* 1911.—Iron & Coal Trades Rev., Aug.16, 1912; p. 244; 1000 w; tables; 35c.

———. *Bilbao Iron Ore, Coal and Iron Trades in* 1911.—Iron & Coal Trades Rev., Aug.16,1912; p. 238; 750 w; 35c.

———. *British Imports and Exports of Iron, Steel and Other Metals in* 1912; [1st semester].—Iron & Coal Trades Rev., July 19,1912; p. 61, 62; tables,; 35c.

———. *Carte allemande de la Westphalie, Pays Rhénans, Luxembourg et Lorraine;* [Map of Westphalia, the Rhineland, Luxemburg and Lorraine; with 18 principal siderurgic works and statistics].—Berlin, 1912.

———. *Chemische Zusammensetzung des Weich und Hartgusses;* [The varieties of commercial foundry pig-iron in Germany, and their chemical composition].—Eisen Ztg., July20,1912; p. 529; 1200 w; 35c.

———. *Die Entwickelung des Eisenindustrie in Norwegen;* [Development of the iron and steel industries in Norway].—Centralbl. d. Hütten & Walzwerke, July25, 1912; p. 392; 1000 w; 35c.

———. *Electric Smelting in Norway;* [Abstract of article in Teknisk Ukeblad].—Mg. Jnl., Nov.23,1912; p. 1145; 35c.

———. *Foreign Trade in Iron and Steel;* [British; review of 5-year period].—Iron & Coal Trades Rev., Oct.11, p. 601; 1000 w; 35c.

———. *French Production of Iron and Steel;* [First semester, 1912].—Iron & Coal Trades Rev., Oct.4, p. 544; 500 w; tables; 45c.

———. *Geschäftsbericht des Stahlwerks-Verbandes für* 1911-12; [Report of the Steel Works Union (German) for the business year 1911; abstract].—Glückauf, Oct. 12, p. 1676-1678; 45c.

———. *International Iron and Steel Specifications;* [Report of committee of Internatnl. Asso. f. Testing Materials].—Iron Age, June20,1912; p. 1516; 2800 w; 30c.

———. *Iron and Steel Companies' Profits;* [British, 1910, 1911].—Iron & Coal Trades Rev., Aug.30,1912; p. 319; 1500 w; 35c.

———. *Italian Coal, Iron and Steel Industries in* 1911.—Iron & Coal Trades Rev., Nov.1, p. 709; 1500 w; 35c.

———. *Italian Mines.*—Mg. Jnl., Nov. 23,1912; p. 1143; 1200 w; 35c.

———. *Large Increase in Pig-Iron Production;* [U. S. production in August].—Iron Trade Rev., Sept.5,1912; p. 433; 1000 w; tables; 20c. Also in Iron Age, Sept.5, p. 538; 2000 w; tables; 30c.

———. *La Cia. Fundidora de Fierro y Acero de Monterrey;* [Review of operations of the Mexican Monterrey Iron & Steel Co., 1911 and 1903-1911].—Econom. Mex., Aug. 17,1912; p. 359; 1200 w; 30c.

———. *Large Gain in Pig-Iron Output;* [Statistics for October, 1912].—Iron Age, Nov.7, p. 1104; 1000 w; tables; 30c. Also in Iron Trades Rev., Nov.7, p. 862; 800 w; tables; 20c.

———. *Le vanadium et ses alliages, l'acier au vanadium;* [Vanadium and its alloys, vanadium steel.—La Revue Industrielle, Nov.2,1912; p. 10; 1200 w; 25c.

———. *Les hauts fourneaux français au 1er Juillet* 1912; [Statistics of blast furnaces in France, July 1, 1912].—Echo d. Mines, July18,1912; p. 834; 1000 w; tables; 35c.

———. *Manganese; Its Production and Uses.* (Bulletin 427, U. S. Geol. Surv.; abstract).—Mg. & Eng. World, Dec.14,1912; p. 1082; 700 w; 10c.

———. *Manufacture of Copper Clad Steel Products;* [Duplex Metals Co. process].—Iron Trade Rev., Sept.12, p. 479; 2400 w*; 20c. Also in Iron Age, Sept.12, p. 752; 2400 w*; 30c.

———. *Montanindustrie in Lüttich* 1911; [Review of iron and steel industries of Liège province, Belgium, 1911].—Techn. Blätter, Oct.12, p. 323; 800 w; tables; 35c.

———. *New Open Hearth Steel Capac-*

ity.—Iron Age, June27,1912; p. 1573; 1000 w; 30c.

———. *Perfectionnements Apportés aux Fours électriques et àleur Application à la Fabrication de l'Acier;* [Improvements in electric furnaces and their application to the manufacture of steel].—Revue Industrielle, Nov.23,1912; p. 10; 1200 w; 25c.; also in Revista Minera, Nov.16, p. 533; 35c.

———. *Per l'industria siderurgica nazionale;* [The problem of nationalization of the iron and steel industries of Italy].—Rassegna Mineraria, Oct.1, p. 173; 500 w; 35c.

———. *Pig-Iron Production in the U. S., Sept.,* 1912.—Iron Trade Rev., Oct.3,1912; p. 617; 750 w; tables; 20c.

———. *Pig-Iron Production;* [Statistics for U. S., June, 1912].—Iron Age, July4, 1912; p. 40; 1000 w; tables; 30c. Also in Iron Trade Rev., July4, p. 15; 1000 w; tables; 20c.

———. *Production, par départements, des aciers fondus et des fontes;* [Statistics of pig-iron and steel-castings production, by departments, in France, 1st semester, 1912].—Rev. Noire, Sept.15,1912; p. 426; tables; 35c.

———. *Roheisenerzeugung in Belgien;* [Statistics of pig-iron production in Belgium, 1st semester, 1911].—Deu. Bergwerks Ztg., July13,1912; p. 1; 500 w; tables; 35c.

———. *Russian Iron and Steel Production;* [1911 and 1912].—Iron & Coal Trades Rev., Aug.9,1912; p. 202; 250 w; tables; 35c.

———. *Spanische Montanindustrie;* [Spanish production of iron are, and pig iron, 1890-1910].—Techn. Blätter. Aug.31, 1912; p. 275; 600 w; tables; 35c.

———. *Statistique des industries extractives et métallurgiques en Belgique* 1911; [Statistics of mining and metallurgic production, wages, labor, etc., in Belgium, 1911].—Annales d. Mines (Belgiq.), Vol. 17, No. 4; 1912; pp. 989-1088; 65c.

———. *Statistique mensuelle de l' industrie métallurgique;* [Monthly statistics of French iron and steel production. May, 1911-1912].—Echo d. Mines, July25,1912; p. 860; table; 35c.

———. *Statistique; Production des combustibles minéraux, des fontes et aciers;* [Statistics of mineral production of France, 1910 and 1911; coal, pig-iron and steels; from Jnl. Officiel, March 3 and 17].—Ann. d. Mines (Paris), June1912; pp. 555-561; 90c. Soc. Amicale de Douai, Bull., June10, p. 340-351; 35c.

German abstract in Glückauf, July13, pp. 1129-1132; 50c.

———. *The Cost of Producing Pig-Iron in Austria.*—Iron & Coal Trades Rev., July 19,1912; p. 96; 500 w; 35c.

———. *The Financial Results of Russian Iron and Steel Works;* [Profits and dividends of South Russia companies, 1909-10, 1910-11].—Iron & Coal Trades Rev., June14,1912; p. 953; 300 w; 35c.

———. *The German Steel Syndicate in* 1911-12; [Review of report].—Iron & Coal Trades Rev., Oct.4, p. 550; 1000 w; 45c.

———. *The Iron and Steel Trades;* [British].—Mng. Jnl., Aug.17,1912; p. 811; 2000 w; 35c.

———. *The Italian Steel Industry;* [Discusses the trust].—Iron & Coal Trades Rev., June14,1912; p. 968; 1000 w; 35c.

———. *The Manufacture of Steel in South Africa from Scrap.*—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 279; 1800 w; $1.

———. *Untersuchung über Elektro-, Siemens-, Martin-, und Nickelstahl an Walzeisen und Konstruktionsteilen;* [Comparisons of electrosteel, Siemens, Martin and nickel steels in rolled iron and structural parts; tests at Grosslichterfelde station].—Centralbl. d. Hütten & Walzwerke, Sept.5,1912; p. 467; 1500 w; 35c.

———. *Variations in the Magnetic Properties of Iron and Steel, Following Variations in Temperature.*—Internatnl. Asso. f. Testg. Materials, Vol. II, No. 11; 1912; 19 pp*; 95c.

Iron and Steel Mills.

Baedeker, D.—*Alfred Krupp und die Entwickelung der Gussstahlfabrik zu Essen mit einer Beschreibung der heutigen Kruppschen Werke;* [Alfred Krupp and the development of the steel-castings plant at Essen, with a description of the present Krupp works].—Essen, 1912; 335 pp.; 20 figs; $1.75 (book).

Carr, W. M.—*An Open-Hearth Furnace of a Detachable Type;* [Carr furnaces in Alloy Steel Casting Co. plant].—Iron Trade Rev., June 20, 1912; p. 1319; 4000 w*; 20c.

Clewell, C. E.—*Modern Illumination in Iron and Steel Plants;* [Read to Iron & Steel Electr. Engrs.].—Iron Trade Rev., Oct.24, p. 779; 4500 w*; 20c.

Groeck, —. *Neue amerikanische Hochofenanlagen;* [Some new American blast-furnace plants, and comparisons with German equipment and practice].—Ver. Deu. Ingr., Zts; May25,1912; pp. 822-828*; 75c.

Hammond, E. K.—*Manufacture of Tool Steel;* [Columbia Tool Steel Co. plant, Chicago Heights, Ill.].—Iron Age, Oct.3,1912; p. 766; 5000 w*; 30c.

Johnson, J. E.—*New Construction for Blast Furnaces;* [4 columns set well out from stack support entire weight; Lake Superior Iron & Cheml. Co., Ashland, Wis.; read to Amer. Inst. Mng. Engrs.; abstract].—Iron Age, Nov.7, p. 1086; 2700 w*; 30c. Also in Iron Trade Rev., Nov.7, p. 873; 2400 w*; 20c.

Jutzi, Wm.—*Krupp* 1812-1912; [History of the Krupp works].—Cologne, 1912; 94 pp.*; 75c (book).

Müller, Fr.—*Krupp in Eisen;* [The Krupp works at Essen].—Hamburg, 1912; 144 pp.; 20 figs.; $1 (book).

Rieger, —. *Die Kärntnerische Eisenindustrie, mit besonderer Berücksichtigung der Waidischer Eisenwerke;* [The decadent iron and steel industries of Carinthia, with special reference to the Waidi steel works and blast furnaces, the last survivor].—Oestr. Zts. f. Berg- & H-wesen, Aug.31, p. —; Sept.21, pp. 544-546; Sept.28, pp. 557-559; Oct.5, pp. 571-573; Oct.12, pp. 589-591; Oct.19, pp. —; $2.

Schnackenburg, L.—*Versuche an dem elektrisch angetriebenen Blockwalzwerk auf der Julienhütte, Oberschlesien;* [Tests of the electric-driven bar-rolling mills at the Julien works, Upper Silesia].—Oberschles. Berg. & Hüttenm. Ver., Zts., July,1912; p. 301; 7000 w*; 50c.

Sommers, J. A.—*New Mills at Algoma Steel Plant;* [Bessemer, blooming and rail mills at Sault Ste. Marie, Ont.].—Iron Age, Sept.26.1912; p. 705; 1200 w*; 30c.

Streeter, R. I.—*Power Machinery of the American Steel Industry; III: Rolling-Mill Engines.*—Engg. Mag., Oct.,1912; pp. 16-35*; 35c.

Van Norden, R. W.—*Pacific Coast Steel Co.'s San Francisco Plant;* [Open-Hearth furnaces and rolling mills, electrically operated].—Jnl. of El'y Power & Gas, Oct.5, 1912; p. 293; 2700 w*; 35c. Also described in Iron Age, July18, p. 123; 1000 w*; 30c.

Vattier, C.—*The Iron Ore Resources of Chile, with a Note on the Corral Iron Works.*—Iron & Steel Inst., Jnl.; Sept.,1912; 45 pp.*; 50c. Abstract in Iron & Coal Trades Rev., Oct.4, p. 521; 5000 w; 45c.

———. *A Crucible and Converter Steel Plant;* [Combination of both processes at Chicago Steel Foundry Co. plant].—Iron Trade Rev., Sept.19,1912; p. 529; 2500 w*; 20c.

———. *A Highly Specialized German Steel Plant;* [Becker works at Willich for carbon and alloy steels by crucible, open hearth and electric processes].—Iron Trade Rev., Aug.22,1912; p. 343; 1800 w*; 20c.

———. *A Water-Cooled Blast Furnace;* [Changing of ordinary to thin-lined water-cooled furnace at Detroit].—Engg. News, Ang.22,1912; p. 337; 3000 w*; 25c. Abstract in E. & M. J., Aug.31, p. 409; 1600 w*; 25c.

———. *An Arrangement for Casting Small Ingots;* [Production in large quantities at 2 European mills].—Iron Age, July 4, 1912; p. 6; 1000 w*; 30c.

———. *Electrically Driven Rolling Mill at Dalzell Works, Motherwell.*—Iron & Coal Trades Rev., May31,1912; p. 873; 1200 w*; 35c.

———. *Features of a New Gray Iron Foundry;* [Taylor & Boggis plant, Cleveland, O.].—Iron Age, June27,1912; p. 1555; 3500 w*; 30c. Also in Iron Trade Rev., July4, p. 17-26; 3500 w*; 20c.

———. *Hawley Down-Draft Furnace Co.'s New Plant;* [Gray-iron foundry, Easton, Pa.].—Iron Trade Rev., Aug.15,1912; p. 315; 1200 w*; 25c.

———. *Iron and Steel Works in the Leeds District, Engl.*—Iron & Coal Trades Rev., Oct.4, pp. 525-541*; 45c.

———. *Making Charcoal Iron under Modern Conditions;* [New blast-furnace plant of Stephenson Charcoal Iron Co., Wells, Mich.].—Iron Trade Rev., Oct.3,1912; p. 619; 2100 w*; 25c.

———. *New Foundry for Converter Steel Castings;* [Egan-Rogers Co., plant at Crum Lynne, Pa.].—Iron Age, Sept.19, 1912; p. 650; 1000 w*; 30c.

———. *New Iron and Steel Works Construction in U. S.;* [Jan. 11-Sept. 12, 1912].—Iron Age, Sept.19,1912; p. 663; 1200 w; 30c.

———. *Progress on Steel Corporation's Duluth Plant;* [Semi-completed stage of Minnesota Steel Co.'s plant].—Iron Trade Rev., June20,1912; p. 1315; 1000 w*; 20c.

———. *Rolling High-Speed Tool-Steel Bars;* [Electrically driven mill of Vanadium-Alloys Steel Co.].—Iron Age, July11, 1912; p. 67; 2500 w*; 30c.

———. *The American Bridge Co.'s Gary Shops.*—Iron Age, July4,1912; p. 8-15; 4500 w*; 30c.

———. *The Historic Port Henry Furnace Dismantled;* [Replaced by modern stack, Cedar Point, N. Y.].—Iron Trade Rev., Sept.26,1912; p. 573; 1200 w*; 25c.

———. *The New Steam-Hydraulic Forging Plant at the New Glasgow Works of the Nova Scotia Iron & Steel Co., Ltd.*—Canadian Engr., June27,1912; p. 859; 2500 w*; 25c.

———. *Visit to the Union Iron and Steel Works;* [near Benoni, Witwatersrand, utilizing scrap iron].—Chem. Met. & Mng. Soc. of S. Afr., Jnl.; Aug.,1912; p. 57; 600 w*; 90c.

———. *Zum 100-jährigen Jubiläum der Firma Krupp;* [Centennial of the Krupp steel works].—Stahl & Eisen, Aug.8,1912; pp. 1293-1343*; 75c.

Furnace Practice and Metallurgy.

See also Part 2, "Thermic Metallurgy" in Metallurgy and Chemistry.

Abbott, R. R.—*Steel and Its Heat Treatment;* [Alloys and varying effects on critical temperatures].—Cleveland Engg. Soc., Jnl.; Sept.,1912; p. 111-135*; 45c. Abstract in Iron Age, May9,1912; p. 1150; 2500 w*; 30c.

Allen, H.—*Metallurgical Manual of Iron and Steel.*—London, 1912; 365 pp; $2 (book).

Ammon, M. A.—*Measurements and Relations of Hardness and Depth of Carbonization in Case-Hardened Steel.*—Amer. Inst. Mng. Engrs., Bull. 70, Oct.,1912; pp. 1167-1179.

Amsler, W. O., J. W. Richards, and F. Gelstharp.—*Exothermic Steel;* [Discussion of thermochemical reactions using bauxite and potash feldspar fluxes].—Met. & Chem. Engg., Nov.,1912; p. 713; 1000 w; 35c.

Amsler, W. O.—*Exothermic Steel.*—Met. & Chem. Engg., Sept.,1912; p. 559; 2500 w*; 35c.

Andrews, J. H.—*Iron and Nitrogen;* [Effect of nitrogeneous gases on critical ranges of the iron-carbon alloys].—Iron & Steel Inst., Jnl.; Sept.1912; 19 pp.*; 50c. Abstract in Iron & Coal Trades Rev., Oct.4, p. 505; 3200 w*; 45c.

Austin, G. W.—*The Gases Evolved on Heating Steel to Its Melting Point in a Vacuum.*—Iron & Steel Inst., Jnl.; Sept., 1912; 7 pp.*; 50c. Abstract in Iron & Coal Trades Rev., Oct.4, p. 504; 1500 w*; 45c.

Bender, Th.—*Der praktische Hochofenbetrieb;* [Practical Blast-Furnace Operation; text-book for beginners and students]—Halle, Prussia; 1912; 121 pp.; $2; (book).

Bent, Q.—*Use of Mayari Iron in Foundry Mixtures;* [Preparation, treatment and tests of Cuban ores and American-made pig metal and castings; read to Amer. Iron & Steel Inst.; abstract].—Iron Age, Oct.31, p. 1028; 3000 w*; 30c. Also in Iron Trade Rev., Oct.31, p. 815; 2500 w*; 20c.

Brayshaw, S. N.—*Hardening of Carbon and Low-Tungsten Steels.*—Engg. Mag., Oct.,1912; pp. 40-48*; 35c.

Bull, R. A.—*Economics of the 8-Hour and 12-Hour Shifts in the Steel Foundry;* [Read to Amer. Foundrym. Asso.; abstract].—Iron Trade Rev., Oct.10, p. 674; 2200 w; 20c.

le Chatelier, H.—*La science pure orientèe vers les applications et les sciences industrielles; la réduction de l'oxyde de fer et les gazogènes;* [The trend of pure science toward applied science; the reduction of iron oxide; gas-producers]. — Rev. de Mét'l'gie, July,1912; pp. 509-531; $1.15.

Chaumenet, E.—*Calculation of Furnace Charges.* — Phila., 1912; 302 pp.; $4; (book).

Corbiau, J.—*Sur un nouveau procédé de coulée des lingots d'acier;* [New process for handling small steel ingots in rolling mills

of moderate output].—Rev. de Mét'l'gie, July,1912; p. 532-538*; $1.15.

Coey, S. C.—*The Use of Electric Power in Steel Mills;* [Read to Amer. Iron & Steel Inst.].—Iron Age, Oct.31, p. 1039; 6000 w; 30c.

Dean, S.—*Ways of Losing and Saving Castings.*—Iron Age, Sept. 26, p. 714; 2000 w*; 30c.

Dean, Stuart.—*Economies in Foundry Mixing and Melting.*—Iron Age, Sept.19, 1912; p. 641; 5000 w*; 30c.

Giolitti, F.—*La Cementazione dell'acciaio;* [The cementation of steel].—Turin, 1912; pp. —; (book).

Goldschmidt, H.—*New Method for Improving the Soundness of Steel Ingots by the Aid of Thermit.*—Iron & Steel Inst., Jnl.; Sept.,1912; 12 pp.*; 50c. Abstract in Engnrg., Oct.4,1912; p. 485; 3000 w*; 35c. Also in Iron & Coal Trades Rev., Oct.4, p. 500; 2100 w*; 45c.

Goodale, S. L.—*The Pittsburgh Blast Furnaces.*—Mex. Mng. Jnl., Aug.,1912; p. 33; 3200 w; 25c.

Gouvy, A.—*Epuration des gaz de hauts fourneaux;* [Purification of blast furnace gases].—Rev. de Métall'gie, Oct.,1912; pp. 771-798*; $1.15.

Greene, A. E., and R. Amberg.—*Function of Slag in Steel Refining.*—Met. & Cheml. Engg., Oct.,1912; p. 656; 600 w; 35c.

Gröndal, G.—*Experiments in the Direct Process Reduction of Iron Ore at Herrang, Sweden;* [From "Jernkontorets Annaler"].—Iron & Coal Trades Rev., Aug.30,1912; p. 310; 1800 w*; 35c.

Gumlich, Dr. E.—*Magnetic Properties of Iron-Carbon and Iron-Silicon Alloys.*—Transactions of the Faraday Society, Oct., 1912; 22 p.*; 75c.

Hadfield, Sir Rob.—*Method of Producing Sound Ingots.*—Iron & Steel Inst., Jnl.; Sept.,1912; 28 pp.*; 50c. Abstract in Iron Trade Rev., Oct.3, p. 624; 3500 w*; 20c. Also in Iron Age, Oct.3, p. 778; 1000 w*; 30c.

Hammond, E. K.—*Scientific Management of a Foundry Cupola.*—Foundry, Oct.,1912; 7 pp.*; 20c.

Hamilton, J. W. H.—*Developments in the Preparation of Iron Ores;* [Paper read before Am. Ir. & Steel Inst.; abstract].—Ir Tr. Rev., Nov.28, 1912; p. 1013; 7500 w; 25c.

Hauser, S.—*Neues Walzwerk zur Herstellung nahtloser Rohre;* [Rolling mills for the production of unjointed pipe].—Centralbl. d. Hütten & Walzwerke, Aug.5, 1912; p. 412; 1500 w*; 35c.

Hermanns, H.—*Ueber Martinofenkopfe;* [Design of furnace tops in various types of Martin furnace].—Giesserei Ztg., Oct.15, p. 632; Nov.1, p. —; 3000 w*; 50c.

Hibbard, Henry D.—*The Solid Non-Metallic Impurities in Steel;* [Paper read before Int. Cong. Test. Materials].—Ir. Tr. Rev., Nov.21,1912; p. 971; 4000 w; 25c.

Heym, W.—*Die Antriebskraft für Stahlwalzwerke;* [Comparisons of the various power drives for steel rolling mills].—Kali Erz & Kohle, July25,1912; p. 735; Aug.5, p. 771; Aug.15, p. —; 7500 w; 75c.

Holverscheid, A.—*Die Walzwerke, Einrichtung und Betrieb;* [Rolling Mills, their Equipment and Operation].—Leipzig, 1912; 163 pp.; 151 figs.; 75c (book).

Howe, H. M.—*Does Commercial Hypo-Eutectic White-Iron, Free from Manganese, Exist?*—Iron & Steel Inst., Jnl.; Sept.,1912; 500 w; 2 pp.; 50c. Reprinted in Iron & Coal Trades Rev., Oct.4, p. 519; 500 w; 45c.

Jantzen, G.—*Air Granulation of Molten Slag;* [at Buderus Iron Works, Wetzlar].—Iron & Coal Trades Rev., Oct.18, p. 636; 1500 w*; 35c.

Japing, E.—*Die Darstellung des Eisens und der Eisenfabrikate;* [Production of iron and fabricated iron].—Vienna, 1912 (2d edition); pp. —; $1.50 (book).

Johnsen, J. E., Jr.—*Effect of Carbon on Quality of Charcoal Iron;* [Paper read before Am. Inst. Mg. Eng.; abstract].—Ir. Tr. Rev., Nov.21,1912; p. 964; 5000 w*; 25c.

Kershaw, John B. C.—*Electric Furnace Methods of Steel Production.*—Ir. Tr. Rev., Nov. 21 and 28, 1912; 9000 w*; 50c.

Klatte, O.—*Herstellung von dichtem Guss;* [Production of dense pore-free cast iron].—Centralbl. d. Hütten & Walzwerke, Aug.5,1912; p. 414; 2000 w*; 35c.

Knaff, A.—*Zur Frage des Schlackenbetons;* [The use of slag in concrete].—Ton Industrie Ztg., Oct.26, p. 1703; 1500 w; 35c.

Kühl, H.—*Der Einfluss des Mangans auf die Volumenänderungen des Gusseisens während des Abkühlens;* [Influence of manganese on volume changes in cast iron during cooling off].—Giesserei Ztg., Oct.1, p. 606; 1000 w; 35c.

Kurek, F.—*Zementation des Eisens mittels Gasen;* [Note on cementation by means of gases].—Stahl & Eisen, Oct.24, pp. 1780-1784*; 75c.

Laval, C. P.—*Ueber Kleinbessemerei;* [The small bessemerizing plant; read to Ver. Deu. Giessereifachleute].—Giesserei Ztg., Oct.15, p. 621; 1600 w; 35c.

Levin, M.—*Direct and Indirect Reduction in the Blast Furnace;* [Abstract from "Metallurgie," Oct.8,1911, page 606].—Met. & Cheml. Engg., July,1912; p. 420; 2200 w; 35c.

Lichte, H. F.—*Das Roheisen und seine Herstellung durch den Hochofenbetrieb;* [Pig iron and its production in the blast furnace].—Leipzig, 1912; pp. —; $2 (book).

Longmuir, P., and W. H. Robinson.—*Steel Works' Yields;* [Efficiency of production in rod and bar mill rolling, etc.].—Iron & Steel Inst., Jnl.; Sept.,1912; 15 pp.*; 50c. Abstract in Iron & Coal Trades Rev., Oct.4, p. 503; 2000 w; tables; 45c.

Longmuir, P.—*Some Aspects of Wire Drawing.*—Iron & Steel Inst., Jnl.; Sept., 1912; 20 pp.*; 50c. Abstract in Iron & Coal Trades Rev., Oct.4, p. 508; 3000 w; tables; 45c.

Malder, P., and Goutal, E.—*De l'Emploi de l'Oxygène sous Pression pour Doser le Carbone Total des Ferro-Alliages;* [The use of oxygen under pressure for regulating the total carbon of ferro-alloys].—Soc. Amicale Ecole Dounai, Bull., Sept. and Oct.,1912; p. 287; 1200 w; 35c.

Maccallum, N. E.—*Recent Developments in Open-Hearth Steel Practice.* — Amer. Inst. of Mechl. Engrs., Bull. 70, Oct.,1912; pp. 1153-1166*; $1.15.

Mars, G.—*Die Spezialstähle;* [The Special Steels; their history, properties, production and treatment].—Stuttgart, 1912; 517 pp*; $5.50 (book).

Martell, P.—*Zur Geschichte des Hüttenwesens in Steiermark;* [History of siderurgy in Styria].—Zentral Verbd. Bergbau Betriebsl. Oestv., Zts.; July15,1912; p. 417-423; 6000 w; 45c.

Mawet, — *L'industrie sidérurgique*

autrefois et aujourd'hui; [Siderurgy past and present.—Monitr. d. Interets Matériels, Oct.4, pp. 3528-3529; Oct.11, pp. 3622-3623; Oct.18, pp.—; 95c.

Mehrtens, J.—*Die Verwendung von Eisen- und Metall-Spänen in der Giesserei;* [Use of briquetted iron and steel scrap in the foundry].—Centralbl. d. Hütten & Walzwerke, June5,1912; p. 292; 3000 w; 35c.

Metz, N.—*Studien über die im Hochofen zwischen den Eisenerzen und Gasen obwaltenden Verhältnisse;* [Studies on the relations between iron ores and the gases in the blast furnace].—Berlin Techn. Hochschule dissert., 1912; 30 pp.; 14 figs.; $1; (thesis).

Meyer, E.—*Neuere Walzwerke;* [New kinks in rolling mills].—Centralbl. d. Hütten & Walzwerke, Aug.15,1912; p. 432, 1500 w*; 35c.

Meuthen, A.—*Kalorimetrische Untersuchung des Systems Eisen-Kohlenstoff;* [Calorimetric investigation of the iron-carbon system].—Ferrum, Oct.8,1912; p. 1; 9000 w*; 75c.

Molar, C.—*La cementazione dell'acciaio;* [Cementation of steel; review of Giolitti's work].—Rassegna Mineraria, Oct.11, p. 195; 2500 w; 35c.

Moldenke, R.—*Commercial Tendencies in Malleable Practice;* [Read to Internatnl. Asso. f. Testg. Materials].—Iron Trade Rev., Sept.5,1912; p. 444; 1200 w; 20c. Also in Iron Age, Sept.12, p. 571; 1200 w; 30c.

Nead, J. H. and J. N. Bourg.—*The Thermal Conductivity of Carburizing Materials.*—Engg. News, Oct.31, p. 802; 1000 w*; 25c.

Nead, J. H., and J. N. Bourg.—*Time to Heat Up Carburizing Materials;* [Experiments with various commercial materials as regards rapidity of case hardening].—Iron Age, Oct.17, p. 904; 1500 w; 30c.

Neu, K.—*Phenomena in Rolling Fresh Steel Ingots;* [from Stahl & Eisen, March7, 1912].—Iron Age, Aug.1,1912; p. 242; 750 w*; 30c.

Neumann, —. *Eine neue Einrichtung zur Beschickung von Siemens-Martin-Oefen mit flüssigem Roheisen;* [New charging device for feeding liquid pig-iron to the Siemens-Martin furnace].—Stahl & Eisen, Sept.19, pp. 1568-1570*; 75c.

de Nolly, H. and L. Veyret.—*Gases Liberated by Carburizing Agents;* [In cementation].—Internatnl. Asso. f. Testg. Materials, Proc.; Vol. 2, No. 10; 1912; 12 pp*; 95c.

Pacher, —. *Ueber verschiedene Arten von Schlackeneinschlüssen im Stahl, ihre mutmassliche Herkunft und ihre Verminderung;* [The various slag inclosures in steel, their origin and prevention].—Stahl & Eisen, Oct.3, pp. 1647-1655*; 50c.

Passow, H. — *Hochofenzement;* [Blast furnace slag cement; production and uses].—Berlin, 1912; 51 pp; 75c (pamphlet).

Paul, F. W.—*Manufacture of Open Hearth Steel with Reference to Improvement in Yield.*—Iron & Steel Inst., Jnl.; Sept.,1912; pp. 13; 50c. Abstract in Iron Trade Rev., Oct.17, p. 736; 3000 w; 50c. Also in Iron & Coal Trades Rev., Oct.4, p. 501; 3000 w*; 45c.

Peebles, J. C.—*Furnace Efficiency: Combustion and Flue Gases* [Third article].—Pr. Elec. & Eng., Nov., 1912; p. 3; 1500 w; 15c.

Ploehn, J.—*Open-Hearth Furnace Design and Manipulation;* [25-ton furnace; read to Amer. Foundrym. Asso., abstract].—Iron Trade Rev., Oct.10, p. 676; 4000 w*; 20c.

Porter, J. J.—*Fuel Efficiency of the Cupola.*—8th Internatnl. Congr. of Appl. Chem'y, 1912; Vol.3, pp. 135-145.

Porter, J. J.—*Notes on Close-Grained Soft Cast-Iron.*—Amer. Foundrym. Asso., Proc. f. Sept., 1912; pp. 137-141; 65c.

Pourcel, A.—*Floris Osmond;* [Biographical sketch of Floris Osmond, with list of published writings].—Rev. de Métal'gie, Oct.,1912; pp. 741-770*; $1.15.

Puppe, J.—*American Rolling-Mill Practice;* [Compares U. S. and German billet, blooming and rail mills].—Iron & Steel Inst., Jnl.; Sept.,1912; 21 pp.*; 50c. Abstract in Iron & Coal Trades Rev., Oct.4, p. 511; 5500 w*; 45c. Also in Iron Age, Oct.10, p. 838; 6000 w*; 30c.

Roberts, D. E.—*The New Roe Puddling Furnace;* [Read to S. Wales Inst. of Engrs.; brief abstract].—Coll'y Guardn., Sept.27, 1912; p. 635; 500 w; 35c. Also in Iron & Coal Trades Rev., Sept.27, p. 455; 500 w; 35c.

Roberts, D.—*Certain Features in the Design of the Modern Blast Furnace;* [Read to S. Wales Inst. of Engrs., Sept.,1912; brief abstract].—Coll'y Guardn., Sept.27, 1912; p. 635; 300 w; 35c. Also in Iron & Coal Trades Rev., Sept.27, p. 455; 300 w; 35c.

Roberts, T. C.—*The New Port Henry Blast Furnace;* [Lower half thin-lined; Northern Iron Co.].—Iron Age, Aug.1,1912; p. 223; 500 w; 30c. Also in Iron Trade Rev., Aug.1, p. 214; 1000 w*; 20c.

Roy, A. R.—*The Making of Wootz or India Steel.*—Iron Age, Oct.3,1912; p. 764; 2000 w*; 30c.

Rugan, H. F.—*The Growth of Cast Irons After Repeated Heatings; Parts 5 and 6.*—Iron & Steel Inst., Jnl.; Sept.,1912; 9 pp.*; 50c. Abstract in Iron & Coal Trades Rev., Oct.4, p. 507; 2000 w*; 45c.

Sauveur, A., and G. A. Reinhardt.—*Note on the Case Hardening of Special Steels.*—Amer. Inst. Mng. Engrs., Bull. 71, Nov., 1912; pp. 1335-1342*; $1.15.

Scott, A. P.—*The Duplex Process at Sydney, N. S.*—Canadian Mng. Jnl., Sept.15, 1912; p. 632; 1800 w*; 35c.

Sherry, R. H.—*Coarse Crystallization Produced by Annealing Low-Carbon Steel.*—Met. & Chem. Engg., Oct.,1912; p. 666; 1600 w*; 35c.

Sl[illegible]er, B. R. and E. J. Cheney.—*Cost [illegible] of Alternating vs. Direct Current Motors for Steel Mill Auxiliaries;* [from "General Electric Review"].—Electrician, Oct.18, p. 46; 5000 w; 35c.

Siemens, F.—*The Siemens Regenerative Gas-Fired "Push" Furnace for Reheating Ingots, Blooms and Billets.*—Iron & Coal Trades Rev., Nov.8, p. 747; 3000 w*; 35c.

[illegible]—*Verhütung schwefelhaltiger Maschinenteile im Hochofen;* [Smelting [illegible] in the blast furnace]. —Stahl & Eisen, Aug.1,1912; pp. 1254-[illegible]*; Aug.15, pp. 1370-1375*; 95c.

[illegible]. J. E.—*Plug Compression in the [illegible] Welds* [treating ingots of cavities [illegible] aluminum or silicon; read to [illegible] Steel Inst.].—Iron Age Oct.17, p. [illegible]; 1000 w; 30c.

Stead, J. E.—*On the Welding Up of Blowholes and Cavities in the Steel Ingot.*—Internatnl. Asso. f. Testg. Materials, Vol. II, No. 11; 1912; pp. 15*; 95c.

Streeter, R. L.—*Power Machinery of the American Steel Industry;* [Pumps, air compressors and turbo-blowers, turbines and auxiliary power plant].—Engg. Mag., Nov., 1912; pp. 204-221*; 35c.

Streeter, R. L.—*Power Machinery of the Steel Industry; Blast Furnaces;* [Blowers, skip hoists, and charging apparatus].—Engg. Mag., Sept.,1912; pp. 864-879*; 35c.

Stupakoff, S. H.—*Practical Pyrometry in the Iron and Steel Industries.*—Engrs. Soc. of W. Penn.; Jnl.; July,1912; pp. —; 75c. Abstract in Iron Age, Aug.15, p. 355; 7000 w; 30c.

Sweetser, R. H.—*The Proper Method of Blowing-in a Blast Furnace;* [Paper read before Am. Inst. Mg. Eng.; abstract].—Mg. & Eng. World, Nov.30,1912; p. 999; 2000 w; 10c.

Sykes, W.—*Power Requirements of Rolling Mills.*—Amer. Inst. Electr. Engrs., Proc., Nov.,1912; pp. 2017-20; 32p*; 65c.

Talbot, B.—*The Talbot Process of Improving Ingots.*—Iron Age, Nov.14, p. 1150; 5000 w*; 30c. Also in Engg. Record, Nov. 16, p. 552; 2800 w; 20c.

Tupper, C. A.—*Ore-Washing Plant of the Wisconsin Steel Co.*—Mg. & Eng. World, July13,1912; p. 49; 2400 w*; 10c.

Van Norden, Rudolph W.—*Electric Iron Smelter at Heroult.*—Jnl. Elec., Nov.23, 1912; p. 453; 4000 w*; 40c.

Wagner, H.—*Selbstkostenberechnung gemischter Werke der Grosseisenindustrie;* [Determining respective costs of operation of various parts of a steel plant].—Berlin, 1912; 236 pp.; 18 figs.; $3.50; (book).

Wangemann, P.—*Fortschritte auf dem Gebiete der Roheisenerzeugung;* [Quarterly review of progress in pig-iron manufacture].—Centralbl. d. Hütten & Walzwerke, July15,1912; p. 371; 2000 w*; 35c.

Watts, Oliver P.—*The Making of Magnesia Crucibles.*—Wis. Eng., Nov.,1912; p. 64; 1000 w; 30c.

Wedding, H.—*Das Eisenhüttenwesen;* [Metallurgy of Iron and Steel].—Leipzig. 1912 (4th enlarged edition); 114 pp; 24 figs; 80c (book).

Wellman, S. T.—*A Story of a Visit to Sir Henry Bessemer.*—Cleveland Engg. Soc., Jnl.; Nov.,1912; pp. 200-205; 40c. Reprinted in Iron Age, Nov.7, p. 1094; 3600 w; 30c.

West, J. G.—*The West Sintering Process;* [Chiefly for iron-ore fines].—E. & M. J., Sept.7,1912; p. 459; 800 w*; 25c.

West, T. D.—*Metallurgy of Cast Iron.*—Cleveland, O.; 1912; $3; (book).

G. M.—*La produzione del ferro esposta in forma popolare;* [Simple account of the operation of a modern blast furnace].—Met. Italiana, July31,1912; p. 454-474*; 45c.

J. G. W.—*Typical Analyses of Iron Blast Furnace Gases.*—Met. & Chemi. Engg., Nov.,1912; p. 713; 250 w; tables; 35c.

———. *Crucible Process for Making Steel Castings;* [Milwaukee type of natural draft, oil-fired furnace].—Iron Trade Rev., Oct.24, p. 769; 4000 w*; 25c.

———. *Der kippbare Vorherd und Mischer für Giessereibetrieb;* [Tilting forehearth and mixer for foundry].—Eisen Ztg., July13,1912; p. 505; 1200 w*; 35c.

———. *Die Erleichterung der menschlichen Handkraftfähigkeit im neuzeitlichen Eisenhüttenbetriebe;* [Eliminating manual labor in iron works; in cokeries, blast furnaces, puddling and steel plants].—S. W. Deu. Industrie Ztg., Aug.2,1912; p. 377; 5000 w; 50c.

———. *Die Gussstahlerzeugung im Stockschen Konverter;* [Steel castings production in the Stock oil-fired converter; from Génie Civil, 1912, No. 10].—Oestr. Zts. f. Berg- & H-wesen, Apr.27,1912; p. 233; 1200 w*; 45c.

———. *Einiges über Kupolöfen und die Beurteilung einer Kupolofenanlage;* [Notes on cupola-plant equipment and operation].—Eisen Ztg., Sept.28, p. 685; Oct.5, p. 701; 2000 w*; 50c.

———. *Electric Smelting in Norway;* [Abstract of article in Teknisk Ukeblad].—Mg. Jnl., Nov.23,1912; p. 1145; 35c.

———. *Industrial Safety in Steel Work.*—Ind'l Engg., June,1912; p. 439; 1000 w*; 35c.

———. *Mayari Foundry Pig-Iron.*—Iron Age, Sept.5,1912; p. 530; 800 w; 30c.

———. *Neuere Mischeranlagen;* [New hydraulically and electrically operated pig-iron mixers; "Demag" types].—Oestr. Zts. f. Berg- & H-wesen, Apr.20,1912; p. 216; 2000 w*; 45c.

———. *Manipulation du Ferro-Silicium Riche;* [The handling of rich ferro-silicon; principles to be adopted for protection against the dangers that may result in the handling of ferro-silicon].—Journal du Four Electriq., Dec.1,1912; p. 508; 300 w; 35c.

———. *Open-Hearth Chargers for South Wales.*—Iron & Coal Trades Rev., Oct.4, p. 545; 600 w*; 45c.

———. *Open-Hearth and Bessemer Steel.*—Iron Age, Nov.7, p. 1100; 1600 w; 30c.

———. *Statistics of British Blast Furnaces for the Quarter Ended June 30, 1912.*—Iron & Coal Trades Rev., Aug.2,1912; p. 175; tables; 35c.

———. *The Eastern-Warwick Steel Co.'s Thin Lined Blast Furnace;* [Pottstown, Pa.]—Iron Trade Rev., July25,1912; p. 167; 700 w*; 20c. Also in Iron Age, July25, p. 182; 1000 w*; 30c.

———. *The new "Harmet" Fluid Compression Plant of the Nova Scotia Steel & Coal Co., Ltd., at Sydney Mines, N. S.;* [Fluid-compression of high-grade steels].—Canadian Mng. Jnl., Sept.15,1912; p. 620; 3500 w*; 35c.

———. *The Pacific Coast Steel Co.'s Plant;* [Open-hearth furnaces and rolling mills, South San Francisco].—Iron Age, July18,1912; p. 123; 1000 w*; 30c.

———. *Water-Cooled Devices on Open-Hearth Furnaces.*—Iron & Coal Trades Rev., June28,1912; p. 1033; 750 w*; 35c.

Blast-Furnace Gas Engines.

See under Combustion Engines.

Electrosiderurgy.

Amberg, R.—*The Slag in Electric Steel Refining;* [Read to Internatnl. Congr. of Appl. Chem'y; abstract].—Met. & Chemi. Engg., Sept.12,1912; p. 601; 2500 w; 35c.

Breuil, P.—*La métallurgie à l' exposition de Bruxelles;* [Electro-steel and ferro-alloys at the Brussels exposition, 1910].—Rev. d' Electrochimie, May,1912; pp. 129-141; 65c.

Burchard, E. F.—*The Production of Iron Ore, Pig-Iron and Steel in* 1911; [Also development of electric-steel].—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 58 pp; 20c.

Dittus, E. J., and R. G. Bowman.—*The Direct Production of Molybdenum Steel in the Electric Furnace;* [Read to Amer. Electrocheml. Soc.; abstract].—Electrician, Sept. 20,1912; p. 979; 1500 w*; 35c.

Franck, C.—*Cowper-Coles' elektrolytisch-*

es Verfahren zur Herstellung von Platten und Röhren, etc., aus Eisen; [Cowper-Coles' process for electrolytic manufacture of iron plates, tubes, etc.; from Palmaer and Brinell's paper in Jern Kontorets Annaler, No. 1, 1912].—Centralbl. d. Hütten & Walzwerke, June15,1912; p. 312; 1500 w*; 35c.

Girod, P.—*The Electric Steel Furnace in Foundry Practice.*—Met. & Cheml. Engg., Oct.,1912; p. 663; 2000 w*; 35c.

Greene, A. E.—*Removal of Phosphorus by Electric Heating;* [Read to Amer. Inst. Mng. Engrs.].—Iron Trade Rev., Nov.14, p. 927; 2700 w; 20c.

Greene, A. E.—*Electric Heating and the Removal of Phosphorus from Iron;* [Read to Internatnl. Congr. of Appl. Chem'y; abstract].—Met. & Cheml. Engg., Sept.,1912; p. 600; 1000 w; 35c.

Hendrickson, B.—*Tempering Tool Steel in an Electric Furnace;* [Read to Railway Tool Foremen's Asso.].—Cheml. Engr., Oct., p. 149; 800 w; 35c. Also in Iron Age, July18, p. 131; 1000 w; 30c.

Héroult, P.—*Electric Steel Refining;* [Read to Internatnl. Congr. of Appl. Chem'y; abstract].—Met. & Cheml. Engg., Sept.,1912; p. 600; 750 w; 35c.

Heym, W.—*Elektrisches Erschmelzen zu Trollhättan;* [Review of Trollhättan experiments on electric smelting of iron ore].—Kali Erz & Kohle, Sept.5,1912; p. 859; 1500 w; 35c.

Heym, W.—*Ein elektrisch betriebener Stahlkonverter;* [An electric steel converter].—Kali Erz & Kohle, June15,1912; p. 591; 1800 w; 35c.

Johnson, W. McA.—*2-Stage Electric Smelting of Iron Ore;* [Johnson zinc furnace applied to iron].—Iron Age, Aug.29, 1912; p. 450; 1000 w*; 30c.

Kershaw, J. B. C.—*Electric Furnace Methods of Steel Production.*—Iron Trade Rev., Nov.7, p. 865; 6000 w*; 20c.

Kunze, —. *Beitrag zum Entwickelungsstand neuzeitlicher Elektroöfen;* [Some new electro-steel furnaces; tests of a 6-ton Nathusius furnace].—Stahl & Eisen, July 4; July 11, pp. 1136-1140*; July 18, pp. 1181-1188*; $1.50.

Lake, E. F.—*Electric Steel Making Processes.*—Cassier's Mag., Aug.,1912; pp. 99-112*; 35c.

Leffler, J. A., and E. Nyström.—*Electric Furnace Pig Iron at Trollhättan;* [Abstract of 98-page supplementary report to Jernkontoret, May,1912].—Met. & Cheml. Engg., July,1912; p. 413; 2000 w*; 35c.

Lipin, W.—*Le four électrique à acier Nathusius;* [The Nathusius electrosteel furnace].—Rev. d' Electrochimie, June,1912; p. 161; 5000 w; 45c.

Lyon, D. A.—*Use of Electric Furnace Pig Iron in the Open Hearth Furnace.*—Met. & Cheml. Engg., Sept., 1912; p. 539; 1100 w; 35c.

Lyon, D. A.—*Reduction of Iron Ores in the Electric Furnace;* [Status of various plants; read to Internatnl. Congr. of Appl. Chem'y; abstract].—Met. & Cheml. Engg., Sept. Suppl., 1912; p. 587; 500 w; 35c.

Lyon, D. A., and F. C. Langenberg.—*Microscopic Structure of California Electric-Furnace Pig-Iron.*—Met. & Cheml. Engg., Aug.,1912; p. 457; 1200 w*; 35c.

Neuman, B.—*Neueste Ergebnisse der elektrischen Roheisenerzeugung auf dem Versuchswerk am Trollhättan;* [The newer Trollhättan experiments on electric pig-iron production, Aug.,1911-March,1912]. — Stahl & Eisen, Aug.22,1912; pp. 1409-1416*; 75c.

Nicou, P.—*La production de la fonte au four électrique en Suède;* [Review of the Trollhättan experiments on electric production of pig-iron; from Com. de Forges de France, Bull. 489; 1912].—Rev. d'Electrochimie, July,1912; p. 201; 700 w; 45c.

Petinot, N.—*The Electric Steel Furnace and the Use of Titanium in Foundry Practice.*—Met. & Cheml. Engg., Nov.,1912; p. 713; 700 w; 35c.

Pinot, R.—*L'électrosidérurgie; aciers et ferros;* [Electrosiderurgy with special reference to production of steels and ferros in France].—Jnl. du Four Electriq., July1, 1912; p. 289; 1800 w; 35c. Also in Echo d. Mines, July8, p. 810; 35c.

Rodenhauser, W. — *Verbesserungen an elektrischen Oefen und neue Verwendungsgebiete in Eisenhüttenwerke;* [Improvements in electro-steel furnaces and new applications in siderurgy; criticism of Nathusius' work].—Chemiker Ztg., Nov.5, p. 1294; 2700 w; 35c.

Stansfield, A. — *Electric Smelting of Titaniferous Ores.*—Canadian Mng. Jnl., July1,1912; p. 448; 1800 w; 25c.

Taussig, R.—*Present Status of the Development of Large Electric Furnaces;* [Read to 8th Internatnl. Congr. of Appl. Chem'y; abstract].—Met. & Cheml. Engg., Oct.,1912; p. 686; 500 w*; 35c.

———. *Der elektrische Hochofen im Tale von Aosta;* [The electric blast furnace for high-grade magnetite at the Cogne works, Aosta, Italy; from "Houille Blanche," No. 3, 1912; p. 88].—Elektrochem. Zts., July, 1912; p. 105; 400 w; 45c.

———. *De la fusion au four électrique du ferro-manganèse;* [Smelting of ferro-manganese in the electric furnace].—Rev. d' Electrochimie, June,1912; p. 186; 1200 w; 45c.

———. *Die gegenwartige Lage der elektrischen Oefen zum Schmelzen von metallenthaltenden Erzen;* [Status of electric smelting of iron ores and iron and steel, with statistics of active furnaces in U. S. and European countries].—Erzbergbau, June15, 1912; p. 201; July1, p. 217; July15; 4500 w; tables; 75c.

———. *Electric Iron-Ore Smelting at Trollhättan;* [Chemistry of processes].—Engnrg., Nov.8, p. 630; 5000 w; 35c.

———. *Elektrische Schmelzöfen;* [Electric smelting ovens].—Centralbl d. Hütten & Walzwerke, June15,1912; p. 310; June 25, p. 33; 6000 w*; 50c.

———. *Electrolytic Steel;* [Richard Lindenberg works, Remscheid-Hasten, Prussia].—U. S. Consular Rep., Oct.2,1912; p.

———. *La fonte au four electrique;* [Electric smelting of iron ore at Trollhättan and elsewhere].—Jnl. du Four Electriq., Aug.1,1912; p. 340; 1200 w; 35c.

———. *Le traitement électrique des mincrais de fer;* [Review of the Trollhättan and Héroult (California) experiments on electric smelting of iron ore].—Ind. Electriq., Apr.25,1912; p. 177; 2000 w; 65c. Also in Rev. d' Electrochimie, May,1912; p. 150; 2000 w; 65c.

———. *Manganeisenhaltige Legierungen und ihre Herstellung und Verwendung;* [Manganese-iron alloys; their manufacture and uses].—Elektrochem. Zts., Aug.,1912; p. 131; Sept., p. —; 2000 w; 50c.

———. *Production de l' acier au molybdène au four électrique;* [Production of molydenum steel in the electrofurnace].—

Rev. d' Electrochimie, June,1912; p. 181; 1000 w; 45c.

———. *Recent Work of Carl Hering;* [Pinch-effect electrosteel furnace].—El. Rev. (London), Sept.20,1912; p. 476; 2000 w*; 35c.

———. *The Iron Ore Mines of Cogne, Valley of Aosta, and a Projected Electric Pig-Iron Plant.*—Met. & Cheml. Engg., Nov., 1912; p. 744; 600 w; 35c.

Ferro-Alloys.

de Alzugaray, B.—*Experiments in Making Open-Hearth Vanadium Steel.*—Mining & Engg. World, Sept.14,1912; p. 478; 600 w; 10c.

Borchers.—*Metallurgic Progress, Aachen,* 1902-1912; [in German].—See Aluminum.

Bornemann, K.—*Die binären Metallegierungen;* [The binary alloys; 18: Chromium; with iron, cobalt, and nickel].—Metallurgie, June8,1912; pp. 346-353*; 50c.

Bornemann, K.—*Die binären Metallegierungen;* [The binary metal alloys (cont.); iron-molybdenum; nickel-molybdenum; iron-tungsten; manganese-iron; manganese-nickel].—Metallurgie, June22,1912; p. 384-392*; 50c.

Breuil, P.—*La métallurgie à l' exposition de Bruxelles;* [Electrosteel and ferro-alloys at the Brussels exposition, 1910].—Rev. d' Electrochimie, May,1912; pp. 129-141; 65c.

Burchard, E. F.—*The Production of Iron Ore, Pig-Iron and Steel in* 1911; [Also Ferro-Alloys].—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 58 pp; 20c.

Burchard, ———. *Manganese Production,* 1911; [Including ferro and spiegel]. See under Manganese.

Cone, E. F.—*Use of Vanadium in Steel Castings.*—Iron Age, Sept.19,1912; p. 645; 3200 w*; 30c.

Dittus, E. J., and R. G. Bowman.—*The Direct Production of Molybdenum Steel in the Electric Furnace;* [Read to Amer. Electrocheml. Soc.; abstract].—Electrician, Sept. 20,1912; p. 979; 1500 w*; 35c.

Glaubert, E. C., and S. Hilpert.—*The Thermal-Magnetic Transformations of 25% Nickel Steel.*—Iron & Steel Inst., Jnl.; Sept., 1912; 8 pp.*; 50c. Abstract in Iron & Coal Trades Rev., Oct.4, p. 510; 2100 w*; 45c.

Heyn, E.—*Metallography,* 1909-1911.—See under Metallurgy, etc.

Petinot, N.—*The Electric Steel Furnace and the Use of Titanium in Foundry Practice.*—Met. & Cheml. Engg., Nov.,1912; p. 713; 700 w; 35c.

Pinot, R.—*L'électrosidérurgie; aciers et ferros;* [Electrosiderurgy with special reference to production of steels and ferros in France].—Jnl. du Four Electriq., July1, 1912; p. 289; 1800 w; 35c.

Shimer, P. W.—*Vanadium in Pig-Iron;* [Discusses presence in ordinary pig irons].—Amer. Inst. Mng. Engrs., Bull. 68, Aug., 1912; p. 883-886; $1.15.

Stoughton, B.—*Notes on Titanium and on the Cleansing Effect of Titanium on Cast Iron;* [Includes extensive titanium bibliography].—Amer. Inst. Mng. Engrs., Bull. 71, Nov.,1912; pp. 1245-1276; $1.15.

Weiss, L., and W. Trautmann.—*Zur Analyse von Ferrozirkon;* [Analysis of ferrozirconium; reply to criticism of Wunder and Saenneret].—Zts. f. analyt. Chemie, 1912, No. 5; p. 303; 800 w; 65c.

Wickhorst, H.—*Influence of Titanium on Bessemer Ingots and Rails.*—Amer. Ry. Engg. Asso., Bull., July,1912; 70 pp.*; 75c. Abstract in Iron Age, Sept.26, p. 718; 1500 w; 30c.

Amer. Vanadium Co.—*Heat Treatment of Steel with Special Reference to Vanadium Steel.*—Ind'l Engg., Sept.,1912; p. 105; 3200 w*; 35c.

Gr.—*Gefahr im Transport von Ferrosilicium;* [Dangers in transportation of ferrosilicon].—Centralbl. d. Hütten & Walzwerk, Sept.15,1912; p. 488; 600 w; 35c.

———. *De la fusion au four électrique du ferro-manganèse;* [Smelting of ferro-manganese in the electrical furnace].—Rev. d'Electrochimie, June,1912; p. 186; 1200 w; 45c.

———. *Die Ferromolybdänlegierung;* [Composition of ferro-molybdenum alloys].—Elektrochem. Zts., July,1912; p. 102; 1000 w; 45c.

———. *Les prix des ferros et alliages en Allemagne;* [Prices of ferros in Germany, January and June, 1912].—Jnl. du Four Electriq., Aug.1,1912; p. 347; 500 w; 35c.

———. *Manganeisenhaltige Legierungen und ihre Herstellung und Verwendung;* [Manganese-iron alloys; their manufacture and uses].—Elektrochem. Zts., Aug.,1912; p. 131; Sept., p. —; 2000 w; 50c.

———. *Production de l'acier au molybdène au four électrique;* [Production of molybdenum steel in the electrofurnace].—Rev. d'Electrochimie, June,1912; p. 181; 1000 w; 45c.

Properties, Testing and Corrosion.

See also under Metallurgy.

Arndt, K.—*Das Rosten des Gusseisens;* [The rusting of cast iron].—Chemiker Ztg., June18,1912; p. 682; 1800 w; 35c.

Bencke, Alb.—*Die Herstellung Weichstahlrohren mit besonderer Berücksichtigung ihrer Rostbeständigkeit;* [Production of mild-steel pipes with special reference to the resistance to corrosion].—Eisen Ztg., July27,1912; p. 539; 1200 w; 35c.

Bencke, A.—*Der Einfluss der Bodenbakterien auf das Rosten von Eisen und Stahlleitungen;* [Influence of soil bacteria on the corrosion of iron and steel pipes].—Centralbl. d. Hütten & Walzwerke, July15, 1912; p. 373; 1200 w; 35c.

Benedicks, C.—*On Allotropy in General and That of Iron in Particular.*—Iron & Steel Inst., Jnl.; Sept.,1912; 34 pp. with bibliography; 50c. Summary in Iron & Coal Trades Rev., Oct.4, p. 524; 600 w*; 45c.

Bernard, V.—*Essais avec le "normamètre";* [Tests with the normameter, a new instrument for measuring hardness and resistance of bars, tubes, etc.].—Rev. de Mét'l'gie, July,1912; p. 570; 1000 w*; $1.15.

Boudouard, O.—*Break-Down Tests of Metals;* [tests with carbon steels].—Internatnl. Asso. f. Testing Materials, Proc.; Vol. 2, No. 8; 1912; 11 pp*; 60c.

Busse, A.—*Report on Rail Corrugation;* [Read to Internatnl. Street & Interurban Ry. Asso., Norway, 1912].—Canadian Engr., Aug.29,1912; p. 377; 3500 w*; 25c.

Burgess, C. F.—*Does Pure Iron Rust?*—Wisconsin Engr., Oct.,1912; pp. 18-21; 30c.

Campbell, Wm. and J. Glassford.—*Constitution of Cast-Iron and the Effects of Superheated Steam.*—Internatnl. Asso. f. Testg. Materials, Proc., Vol. II, No. 13; 1912; 16 pp*; 95c.

Charpy, G.—*Report on Impact Tests and the Work of Committee No.* 26; [Use of

nicked bars].—Internatnl. Asso. f. Testing Materials, Bull. 9, June,1912; 14 pp; 90c.

Damour, A.—*Application of the Methods of Mechanical Testing Adopted for Other Metals to Foundry-Pig Testing.*—Internatnl. Asso. f. Testing Materials, Bull. 9, June,1912; 8 pp*; 90c.

Derihon, G.—*Notes on the Brittleness Test.*—Internatnl. Asso. f. Testg. Materials, Bull. 9, June,1912; 5 pp; 90c.

Devries, R. P.—*The Relation of the Tensile Strength of Steel to Magnetic and Other Hardness Tests.*—Internatnl. Asso. f. Testg. Materials, Proc.; Vol. II, No. 10; 1912; 7 pp*; 95c.

Dudley, P. H.—*Testing Rails for Elongation and Ductility of the Metal under the Drop-Testing Machine.*—Internatnl. Asso. f. Testg. Materials, Vol. II, No. 11; 1912; 10 pp*; 95c.

Fea, L.—*Mechanical Tests of Special Steels for Naval Constructions.*—Internatnl. Asso. f. Testg. Materials, Vol. II, 1912; No. 11; 8 pp*; 95c.

Fleming, Wm. R.—*Corrision of Iron in Pure Water and Air Combined; The Electrolytic Theory Again Confirmed.*—Jnl. of Ind'l & Engg. Chem'y, July,1912; p. 480; 5500 w*; 65c.

Fleming, W. R.—*Corrosion of Iron and Steel;* [Experiments to confirm the electrolytic theory; read to Cincinnati section, Amer. Chem'l. Soc.].—Iron Age, July11, 1912; p. 82; 2000 w*; 30c.

Frantz, G.—*Können Rostungserscheinungen an Dampfkesseln zurückgeführt werden auf elektrische Ströme die infolge der Verwendung zweier Flusseisensorten entstehen?* [May boiler corrosion be due to electric currents generated by using 2 kinds of cast iron?].—Oberschles. Berg- & Hüttenm. Ver; Zts; June,1912; p. 263; 1800 w; 45c.

Frémont, C.—*New Method for Mechanical Tests on Cast Iron.*—Internatnl. Asso. f. Testg. Materials, Bull. 9, June,1912; 6 pp*; 90c.

Fremont, Ch.—*The Testing of Metals by Impact on Notched Bars.*—Internatnl. Asso. f. Testg. Materials, Bull. 9, June,1912; 5 pp; 90c.

Frémont, C.—*New Method of Testing Steel Wire.*—Internatnl. Asso. f. Testing Materials, Bull. 9, June,1912; 7 pp; 500 w*; 90c.

Frémont, C.—*New Method of Testing Rivet Steels;* [To be read at 6th congress of Internatnl. Asso. f. Testing Materials].—Canadian Engr., Aug.15,1912; p. 325; 1000 w*; 25c.

Gagarin, A.—*Automatic Impact Stress-Strain Recorders.*—Internatnl. Asso. f. Testing Materials, Bull. 9, June,1912; 24 pp*; 90c.

Ganz, A. F.—*Electrolysis of Street Mains;* [Read to Amer. Water Works Asso.; abstract].—Municipal Jnl., July11,1912; p. 45; July18, p. —; 2000 w*; 30c.

Gessner, A.—*Nicked-Bar Impact Tests on Tough Steels.*—Internatnl. Asso. f. Testing Materials, Bull. 9, June,1912; 7 pp*; 90c.

Grard, C.—*Research on the Hardness of Steels.*—Internatnl. Asso. f. Testing Materials, Vol. II, No. 9; June,1912; pp. 14*; 90c.

Hadfield, Sir Rob.—*On a New Method of Revealing Segregation in Steel Ingots.*—Iron & Steel Inst., Jnl.; Sept.,1912; 10 pp.; 9 plates; 50c. Abstract in Iron Age, Oct.3, p. 778; 3500 w*; 30c.

Howard, J. E.—*Notes on Features Associated with the Tests of Steel Rails.*—Internatnl. Asso. f. Testing Materials, Bull. 9, June,1912; 3 pp; 90c.

Kail, J.—*The Estimation of Pig-Iron;* [Shows unreliability of chemical estimation by appearance of fracture].—Internatnl. Asso. f. Testing Materials, Bull. 9, June, 1912; 4 pp; 90c.

Kommers, J. B.—*Repeated Stress Testing;* [Landgraf-Turner machine on cold rolled steel].—Internatnl. Asso. f. Testg. Materials, Vol. II, No. 13; 1912; 15 pp*; 95c.

Kommers, J. B.—*Repeated Stress Testing, II: Quality Factor, and a Suggested Standard Test, with Results for Various Materials.*—Internatnl. Asso. f. Testg. Materials, Vol. II, No. 13; 1912; 8 pp; 95c.

Kosmann, B. and K. Arndt.—*Zur Frage des "Rostens des Eisen";* [Discussion of Arndt's paper on electrolytic aspect of corrosion].—Chemiker Ztg., July6,1912; p. 774; 1000 w; 35c.

Liedgens, J.—*Ueber den Einfluss des Arsens auf die Eigenschaften des Flusseisens;* [Influence of arsenic on the properties of cast iron].—Berlin Techn. Hochschule dissert., 1912; 22 p.; 16 figs.; $1; (thesis).

Mesnager, A.—*On Means of Foreseeing Ruptures of Rails.*—Internatnl. Asso. f. Testg. Materials, Proc.; Vol. II, No. 10; 1912; 4 pp*; 95c.

de Nolly, H., and L. Veyret.—*Note on the Magnetic Properties of Dynamo Sheet Iron.*—Internatnl. Asso. f. Testing Materials, Bull. 9, June,1912; 14 pp*; 90c.

Porter, J. J.—*Typical Cast-Iron Uses and Applicable Tests;* [Read to Internatnl. Asso. f. Testg. Materials, N. Y.].—Iron Trade Rev., Sept.5,1912; p. 442; 2800 w; 20c. Also in Iron Age, Sept.5, p. 528; 3500 w; 30c.

Robin, F.—*On Several Mechanical Properties of Metals in the Hot State.*—Internatnl. Asso. f. Testing Materials, Bull. 9, June,1912; 10 pp; 90c.

Robin, F.—*Abrasion Tests of Steel.*—Internatnl. Asso. for Testg. Materials, Vol. II, No. 9; June,1912; pp. 2; 800 w; 90c.

Robin, F.—*Modifications of Iron Below 700°;* [Allotropic transformation at 100-250°, and modification at 500°].—Internatnl. Soc. f. Testing Materials, Proc., Vol. 2, No. 8; 1912; pp. 1-11*; 60c.

Roos af Hjelmsäter, J. O.—*On Endurance Tests of Machine Steel.*—Internatnl. Asso. f. Testing Materials, June,1912; 10 pp*; 90c.

Roos af Hjelmsäter, J. O.—*Some Static and Dynamic Endurance Tests.*—Internatnl. Asso. f. Testg. Materials, Bull. 9, June, 1912; 11 pp*; 90c.

Saniter, E. H.—*Hardness Testing and Resistance to Mechanical Wear.*—Internatnl. Asso. for Testg. Materials, Bull. No. 9; June,1912; 7 pp*; 90c.

Schmid, A.—*On the Influence of the Shape of the Bar, and of the Treatment of the Metal, Upon the Results of Notched Bar Impact Tests;* [of mild steels].—Internatnl. Asso. f. Testing Materials, Proc.; Vol. 2, No. 8; 1912; 6 pp; 60c.

Schulte, W. B., J. K. Clement, and others.—*Symposium on Corrosion; International Congress of Applied Chemistry;* [Ab-

stract].—Met. & Cheml. Engg., Sept.12, 1912; p. 646; 3000 w; 35c.

Seyrich, C. A.—*Ueber die Einwirkung des Ziehprozesses auf die wichtigsten technischen Eigenschaften des Stahles;* [Effect of the drawing process on the more important properties of steel].—Berlin, 1912; 65 pp.; 30 figs; $1.

Stanton, T. E.—*Recent Researches Made at the National Physical Laboratory, Teddington, England, on the Resistance of Metals to Alternating Stresses.*—Internatnl. Asso. f. Testing Material, Bull. 9, June, 1912; 6 pp*; 90c.

Stead, J. E.—*Investigation on the Influence of the Shape of Test Bars on the Mechanical Properties of Cast Iron.*—Internatnl. Asso. f. Testing Materials, Proc.; Vol. 2, No. 8; 1912; 8 pp*; 60c.

Walker, Wm. H.—*The Relative Corrosion of Iron and Steel Pipe as Found in Service;* [Read to New Engl. Water Works Asso.; abstract].—Jnl. of Ind'l & Engg. Chem'y, July,1912; p. 486; 1600 w; 65c.

West, T. D.—*Test Bars for Chillable Cast Irons;* [Read to Internatnl. Asso. f. Testg. Materials].—Iron Age, Sept.14,1912; p. 578; 2400 w*; 30c.

Wickhorst, M. H.—*American Research Work on Rails, Conducted Jointly by Railroads and Steel Manufacturers.*—Internatnl. Asso. f. Testg. Materials, Vol. II, No. 11; 1912; 9 pp*; 95c.

Zs, F.—*The Variation in the Mechanical Properties and Structures of a Few Special Tool Steels Annealed Between 600° and 1000° C.*—Internatnl. Asso. f. Testg. Materials, Proc.; Vol. II, No. 10; 1912; 12 pp*; 95c.

Asso. of Amer. Steel Mnfrrs.—*Revision of the Standards of Structural and Boiler Steel Specifications.*—Iron Age, Aug.22, 1912; p. 409; [illegible] w; 30c.

———. *An Apparatus for Notched-Bar Impact Tests;* [Used at Paris-Lyon-Mediterranée Ry. Co. testing laboratories].—Internatnl. Asso. f. Testing Materials, Bull. 9, June,1912; 11 pp*; 90c.

———. *Die Prüfung galvanisierten Eisendrahtes;* [Testing galvanized iron and steel wires and cables; from Kemi och Bergvetenskap, 1912, No. 5].—Centralbl. d. Hütten & Walzwerke, July15,1912; p. 372; 600 w; 35c.

———. *Hot Water and Corrosion.*—Power, June25,1912; p. 906; 2100 w; 15c.

———. *Les nouveaux laboratoires des usines Krupp, à Essen;* [The new Krupp laboratories].—Rev. de Métallurgie, Sept., 1912; pp. 721-740*; $1.15.

———. *The Coating of Steel Pipes;* [Report of Western Australia commission on Coolgardie mains; abstract].—Canadian Engr., July25,1912; p. 231; 500 w; 25c.

Mineralogy and Metallography of Iron and Steel.

Arnold, J. O., and L. Aitchison.—*The Solubility of Cementite in Hardenite.*—Iron & Steel Inst., Jnl.; Sept.,1912; 8 pp.*; 50c. Abstract in Iron & Coal Trades Rev., Oct.4, p. 520; 1000 w*; 45c.

Belaïew, N. T.—*Entre la microstructure et la cristallisation del'acier;* [Microstructure and crystallization of steel].—Rev. de Métallurgie, Sept.,1912; pp. 647-681*; $1.15.

Calian, J.—*Die Bildung des Osmondits in hypo-eutektoiden Stählen;* [The formation of osmondite in hypereutectic steels].—Metallurgie, June22,1912; p. 392-396*; 50c.

Dawkins, C. T.—*Some Observations on the Amount of Combined Carbon in Pig-Iron.*—Met. & Cheml. Engg., Sept.,1912; p. 511; 1000 w*; 35c.

Howe, H. M.—*Notes on Ruff's Carbon-Iron Equilibrium Diagram.*—Amer. Inst. of Mng. Engrs., Bull. 71, Nov.,1912; pp. 1181-1226*; $1.15.

Howe, H. M. and A. G. Levy.—*Life History of Pro-Eutectoid Cementite.* —Internatnl. Asso. f. Testg. Materials, Proc. Vol. II, No. 13; 1912; 14 pp*; 95c.

Howe, H. M. and A. Sauveur.—*Nomenclature of the Microscopic Substances and Structures of Steel and Cast Iron;* [Report of committee 53].—Internatnl. Asso. f. Testg. Materials, Proc. Vol. II, No. 13; 1912; 18 pp; 95c.

Lyon, D. A., and E. C. Langenberg.—*Microscopic Structure of California Electric-Furnace Pig-Iron.*—Met. & Cheml. Engg., Aug.,1912; p. 457; 1200 w*; 35c.

Meuthen, —. *Kalorimetrische Untersuchung des Systems Eisen-Kohlenstoff;* [Calorimetric investigation of the iron-carbon system in iron].—Ferrum, Oct.8, pp. 1-21*; 50c.

Pomp, A.—*Die Metallographie als Hilfsmittel zur Untersuchung und Beurteilung von Eisen und Stahl;* [Metallography as an aid in the testing and classification of iron and steel].—Centralbl. d. Hütten & Walzwerke, Sept.5,1912; p. 465; 1000 w*; 35c.

Portevin, A. and Bernard, V.—*Observations sur la structure de quelques pièces brutes de forge; Relation entre les propriétés mécaniques et la structure de "Widmanstätten";* [Observations on the structure of some forged carbon steels; relation between mechanical properties and Belaiew's "Widmanstätten" structure].—Rev. de Mét'l'gie, July,1912; p. 544-550*; $1.15.

Ruff, O.—*Ueber das System Eisen-Kohlenstoff;* [The system iron-carbon; status of carbon in irons and steels].—Zts. f. Elektrochemie, Sept.1,1912; p. 761; 1500 w; 45c.

Sauveur, A.—*Metallography of Iron and Steel.*—N. Y., 1912; 400 pp*; $6 (book).

Sauveur, A.—*Note on the Crystalline Growth of Ferrite Below Its Thermal Critical Range.*—Internatnl. Asso. f. Testg. Materials, Vol. II, No. 11; 1912; 12 pp*; 95c.

Smits, A.—*Ueber das System Eisen-Kohlenstoff;* [On the system iron-carbon].—Zts. f. Elektrochemie, Sept.15.1912; p. 816; 500 w; 45c.

White, C. A.—*Microscopical Analysis of Steel Sheets;* [Read to Amer. Iron & Steel Inst.].—Iron Age, Nov.14, p. 1148; 2700 w*; 30c. Also in Iron Trade Rev., Nov.14, p. 921; 2700 w*; 20c.

Chemistry of Iron and Steel.

Bauer, O., and E. Deiss.—*Probenahme* und Analyse von Eisen und Stahl; [Sampling and analysis of iron and steel].—Berlin, 1912; pp. —; (book).

Blair, A. A.—*The Chemical Analysis of Iron;* [Including ores, metals, slags, fluxes, fuels, and furnace and producer gases].—Philadelphia, 1912; 7th edition; pp. —*; $4; (book).

Cain, J. R.—*The Determination of Chromium and Its Separation from Vanadium in Steels.*—U. S. Bur. of Standards, Technologic Paper No. 7; 1912; 6 pp; 50c.

Cain, J. R., and J. C. Hostetter.—*Rapid*

Method for Determination of Vanadium in Steels, Ores, etc., Based on Its Quantitative Inclusion by the Phosphomolybdate Method.—U. S. Bur. Standards, Technologic Paper No. 8; 1912; 20 pp; 50c.

Camp, J. M.—*Methods of the U. S. Steel Corp. for the Commercial Sampling and Analysis of Pig Iron;* [Read to 8th Internatnl. Congr. of Appl. Chem'y].—Met. & Cheml Engg., Oct.,1912; p. 668; 12,000 w; 35c.

Danforth, C. W.—*Methods of Sampling Steel Billets.*—Iron Age, Aug.15,1912; p. 346; 2000 w*; 30c.

Döring.—*Progress in Metal Analysis,* 1911; [in German].—See under Platinum.

Erhard, G.—*Der Laborant in der Eisengiesserei und die Untersuchung des Roheisens und der übrigen Materialen nach erprobten analytischen Methoden;* [Laboratory guide in the iron foundry and the examination of pig-iron and other materials by approved analytic methods].—Dresden, 1912; pp. —; $1.50 (book).

Hammarberg, E.—*Ueber Bestimmung des Kohlenstoffgehaltes in Eisen und Stahl durch direkte Verbrennung mit Sauerstoff im elektrischen Ofen;* [Carbon estimation in iron and steel by direct combustion with oxygen in the electric furnace; from Jern Kontorets Annalen, No. 1, 1912].—Centralbl. d. Hütten & Walzwerke, June15,1912; p. 311; 2000 w*; 35c.

Herron, J. H.—*Samples of Steel for Analysis;* [Drilling and milling methods].—Iron Age, Aug.22,1912; p. 403; 500 w*; 30c.

Hibbard, H. D.—*The Solid Non-Metallic Impurities in Steel, "Sonims."*—Internatnl. Asso. f. Testg. Materials, Proc., Vol. II, No. 13, 1912; 15 pp; 95c.

Kall, J.—*The Estimation of Pig-Iron;* [Shows unreliability of chemical estimation by appearance of fracture].—Internatnl. Asso. f. Testing Materials, Bull. 9, June,1912; 4 pp; 90c.

Kichline, F. O.—*Determination of Carbon in Steel by Direct Combustion in the Newest Form of Shimer Crucible, with the Aid of a Perforated Clay Disc.*—Jnl. of Ind'l & Engg. Chem'y, Sept.,1912; p. 683; 600 w*; 65c.

Mahler, P. and E. Goutal.—*Dosage du carbone total des aciers et des ferroalliages par combustion sous pression d'oxygène;* [Estimation of total carbon in steels and ferros by combustion under pressure with oxygen].—Rev. de Métall'gie, Oct.,1912; pp. 799-814*; $1.15.

Mainwaring, W. D.—*Problems in Actual Work Practice in the Metallurgy of Steel;* [Sampling, and variation of sulphur content; read to Detroit Soc. of Chemists].—Cheml. Engr., Aug.,1912; p. 72; 3100 w*; 35c.

Mainwaring, Wm. D.—*Problems of the Factory Metallurgist;* [Read to Soc. of Detroit Chemists].—Iron Age, July27,1912; p. 184; 4000 w*; 30c.

Meurice, A.—*Dosage du phosphore dans les minerais de fer, fontes et aciers;* [Estimation of phosphorus in iron ores, pig iron and steel].—Etudiants Inst. Meurice, Bull. No. 1, 1912; pp. 19-32.

Morrison, W. L.—*Determination of Carbon in Steel.*—E. & M. J., June25,1912; p. 1285; 1500 w*; 25c.

Neumann, Dr.—*Ueber das Probenehmen;* [Sampling at smelters; discusses work of Schäfer and Corleis].—Chemiker Ztg., June 13,1912; p. 671; 1000 w; 35c.

de Nolly, H.—*Method for the Rapid Determination of Total Carbon in Iron, Steel, Cast-Iron and in the Iron Alloys.*—Internatnl. Asso. f. Testing Materials, Proc., Vol. 2, No. 8; 1912; pp. 9*; 60c.

Pancke, —. *Kurze Analysen Vorschriften. Zum Gebrauch in Metallhütten-Laboratorien;* [Short-cut analytic methods for use in metallurgic laboratories].—Halle; 1912; $1 (book).

Piña de Rubies, D. S.—*Determinacion del hierro al estado ferroso en las cromitas (ferro-cromo);* [Determination of ferrous iron in chromite and ferro-chrome].—Rev. Minera, Aug.8,1912; p. 377; 1000 w; 35c.

Walker, W. H., and W. A. Patrick.—*Determination of Oxygen in Iron and Steel by Reduction in an Electric Vacuum Furnace.*—8th Internatnl. Congr. of Appl. Chem'y, 1912; Vol. 21, pp. 139-148.

Weiss, L., and W. Trautmann.—*Zur Analyse von Ferrozirkon;* [Analysis of ferrozirconium; reply to criticism of Wunder and Saenneret].—Zts. f. analyt. Chemie, 1912, No. 5; p. 303; 800 w; 65c.

Wood, E. E., and C. G. Hellman.—*A Colorimetric Method for the Determination of Carbon in Iron and Steel;* [Two notes on article in May issue].—Jnl. of Indl. & Engg. Chem'y, July,1912; p. 547; 500 w; 65c.

Zinberg, S.—*Eine einfache Methode zur quantitativen Bestimmung des Kupfers im Stahle;* [Rapid method of quant. estimation of copper in steels].—Zts. f. analyt. Chemie, 1912, No. 1; pp. 19-20; 500 w; 65c.

Ver. Deu. Eisenhüttenleute, Chemiker Komm.—*Zur Bestimmung der Kieselsäure in Eisenerzen;* [Estimation of silica in iron ores].—Zts. f. analyt. Chemie, 1912, No. 6, p. 388; 250 w; 65c.

Asso. of Amer. Steel Manfrrs.—*Standard Methods of Sampling for Check Analyses of Steel.*—Iron Trade Rev., Sept.19, 1912; p. 545; 1000 w; 20c.

U. S. Steel Corp., Chemists' Committee.—*Methods of the U. S. Steel Corporations for the Commercial Sampling and Analysis of Pig Iron.*—8th Internatnl. Congr. of Appl. Chem'y, 1912; Vol. 21, pp. 91-122.

———. *Les nouveaux laboratoires des usines Krupp, à Essen;* [The new Krupp laboratories].—Rev. de Métallurgie, Sept., 1912; pp. 721-740*; $1.15.

———. *Methods of Analysis Used in Armour Institute of Technology; Iron and Steel.*—Cheml. Engr., Oct., p. 156; 2100 w*; 35c.

———. *The Determination of Phosphorus or Phosphoric Anhydride;* [Armour Inst. methods].—Cheml. Engr., Sept.,1912; p. 119; 1500 w; 35c.

CHAPTER V.

Alloys, Antimony, Chromium, Manganese, Molybdenum, Titanium, Tungsten, Uranium, Vanadium.

ALLOYS (NON-FERROUS)

Bancroft, W. D., and J. M. Lohr.—*On the Tensile Strength of Copper-Zinc Alloys.*—Internatnl. Congr. of Appl. Chem'y, Proc.; Vol. 2, 1912; pp. 9-16.

Bensel, F.—*Versuche zur Verminderung der Metallverluste beim Messingschmelzen;* [Experiments toward diminishing metal losses in smelting brass; electric smelting]. —Metallurgie, Aug.22,1912; p. 523-531*; 45c.

Bornemann, K.—*Die binären Metallegierungen;* [The binary metal alloys (cont.); iron-molybdenum; nickel-molybdenum; iron-tungsten; manganese-iron; manganese-nickel].—Metallurgie, June22,1912; p. 384-392*; 50c.

Bornemann, K., and G. von Rauschenplat. —*Die elektrische Leitfähigkeit der Metallegierungen im flüssigen Zustande;* [Electrical conductivity of molten alloys; antimony-copper, and copper-nickel].—Metallurgie, Aug.8,1912; p. 473-486; Aug.22, pp. ——; 95c.

Bornemann, K.—*Die binären Metallegierungen;* [The binary alloys; 18: Chromium; with iron, cobalt, and nickel].—Metallurgie, June8,1912; pp. 346-353*; 50c.

Broniewski, W.—*Relations Between the Structure of Alloys and Their Electric Properties;* [Tests of aluminum-copper alloys]. —Internatnl. Asso. f. Testing Materials, Bull. 9, June,1912; 12 pp*; 90c.

Campbell, Wm.—*Ueber Blei-Zinn-Antimon Legierungen;* [Lead-tin-antimony alloys].—Metallurgie, July8,1912; p. 422-425*; tables; 50c.

Campbell, Wm.—*The Thermal Diagram, with Special Reference to the Bronzes.*— Amer. Inst. of Metals, Sept.,1912; pp. 3-16*; 50c.

Carpenter, H. C. H.—*The B-Constituent of the Copper-Zinc Alloys;* [Two papers read to Inst. of Metals; abstracts, with discussion].—Engnrg., Sept.27,1912; p. 431; 3000 w; 35c.

le Chatelier, H.—*Alloys by Superposition;* [Microscopic studies of contact of superimposed fused and cooled contacts; antimony-tin; antimony-silver]. — Internatnl. Asso. f. Testing Materials, Proc.; Vol. 2, No. 8; 1912; pp. 12*; 60c.

Chouriguine, M.—*Sur les Alliages du Platine avec l'aluminum;* [The alloys of platinum with aluminum].—Revue de Métallurgie, Nov.,1912, p. 874; 2000 w*; $1.15.

Cohn, L. M.—*Duralumin;* [Some tests of duraluminum].—Elektrotechnik & Maschinenbau, Sept.29, p. 809-815; Oct.6, pp. 829-832; 50c.

Crispo, D.—*Dosage de l'étain dans le ferblanc;* [Estimation of tin in white metal]. —Etudiants Inst. Meurice, Bull. No. 1. 1912; pp. 150-152.

Dean, W. R.—*Foundry Tests and Foundry Practice;* [Brass; read to Amer. Inst. of Metals].—Cheml. Engr., Oct., p. 147; 2000 w; 35c.

Dean, W. R.—*Foundry Tests and Foundry Practice;* [Brass].—Amer. Inst. of Metals, Sept.,1911; Paper No. 13; 8 pp; 50c.

Faust, O.—*Wissenschaftliche Uebersichten; Allgemeines Verhalten der binären Metallegierungen;* [Review of recent literature on the binary alloys].—Zts. f. Elektrochemie, Junel,1912; p. 430; 6000 w*; 45c.

Friedrich, K.—*Ueber ein Quarzglasquecksilber-Thermometer nach Dr. H. Beckmann zur Bestimmung geringer Antimongehalte in Blei-Antimonlegierungen;* [Beckmann quartz-glass mercurial thermometer for estimating small amounts of antimony in lead-antimony alloys]. — Metallurgie, July22, 1912; p. 446; 1500 w*; 50c.

Grand, C.—*Industrial Application of Microscopic Metallography for Controlling the Work Put on Copper and Brasses.*— Internatnl. Asso. f. Testg. Materials, Vol. II, No. 11; 1912; 13 pp*; 95c.

Gumlich, Dr. E.—*Magnetic Properties of Iron-Carbon and Iron-Silicon Alloys.*— Transactions of the Faraday Society, Oct., 1912; 22 p.*; 75c.

Hannover, H. I.—*The Production of Porous Metals;* [Principle of eutectic alloys applied in producing accumulator plates and lead-antimony alloys; from "Ingenioren," June 15].—Met. & Cheml. Engg., Sept., 1912; p. 509; 1000 w; 35c.

Hansen, C. A.—*Electric Smelting of Copper and Brass.*—Amer. Inst. of Metals, Paper No. 11, Sept.,1912; 20 pp*; 50c.

Haynes, Elw.—*Cobalt Alloyed with Chromium and other Metals;* [Read to Amer. Inst. Mng. Engrs.].—Iron Trade Rev., Nov.14, p. 926; 1500 w; 20c.

Heusler, Dr. F.—*The Properties of the Alloys of Manganese with Boron, Arsenic, Antimony, Bismuth and Tin.*—Tr. Faraday Soc., Oct.,1912; 5 p.; 75c.

Heyn, E.—*Metallography,* 1909-1911.— See under Metallurgy, etc.

Kloss, H.—*Handling the Copper-Tin Alloys in Brass Foundry;* [from Giesserei Ztg.].—July,1912; p. 104; 1000 w; 25c.

Law, E. F.—*The Influence of Oxygen on the Properties of Metals and Alloys;* [Firebox copper and bronzes; read to Inst. of Metals].—Engnrg., Sept. 27,1912; p. 439; 3000 w*; 35c.

Lindum, F.—*Manganese-Copper Alloys;* [from "Southern Machinery"]. — Mechl. World, Aug.23,1912; p. 92; 1500 w; 35c.

Mahler, P., and Goutal, E.—*De l'Emploi de l'Oxygène sous Pression pour Doser le Carbone Total des Ferro-Alliages;* [The use of oxygen under pressure for regulating the total carbon of ferro-alloys].— Soc. Amicale Ecole Dounai, Bull., Sept. and Oct.,1912; p. 287; 1200 w; 35c.

Masselon, E.—*Le métal babbit, sa fabrication;* [Babbit metal, its manufacture; reviews Jones' paper from "Amer. Machinist"].—Métallurgie, July3,1912; p. 419; July 10, p. 435; 2000 w; 50c.

McAdams, Wm. H.—*New White Metal Alloy, Argental* [silver-aluminum].—Mex. Mng. Jnl., Oct.,1912; p. 27; 300 w; 25c.

Pecoraro, N.—*Experimental Tests of White Metals for Engines.*—Internatnl.

Asso. f. Testg. Materials, Proc., Vol. II, No. 13, 1912; 19 pp*; 95c.

Portevin, M. A.—*Sur la Méthode Chemique pour l'étude des Alliages;* [On the chemical method for the study of alloys].—Revue de Métallurgie, Nov.,1912, p. 884; 1500 w*; $1.15.

Portevin, A. and E. Nusbaumer.—*Note on the Wear of Bronzes.*—Internatnl. Asso. f. Testing Materials, Proc., Vol. 2, No. 8; 1912; pp. 4; 60c.

Raydt, U.—*Ueber Gold-Silberlegierungen;* [The gold-silver alloys].—Zts. f. anorgan. Chemie, Vol. 75, No. 1, 1912; pp. 58-62*; $1.20.

Rose, T. K.—*The Annealing of Coinage Alloys;* [Read to Inst. of Metals; abstract of paper and discussion].—Engnrg., Sept. 27,1912; p. 433; 2000 w; 35c.

Sander, W.—*Ueber die Legierungen des Palladiums mit Antimon;* [The alloys of palladium and antimony].—Zts. f. anorgan. Chemie, Vol. 75, No. 2, 1912; pp. 97-106*; $1.20.

Schilling, H.—*Chrombestimmung in Zinn und Antimon enthaltenden Bronzen;* [Estimation of chromium in bronzes containing tin and antimony].—Chemiker Ztg., June20, 1912; p. 697; 400 w; 30c.

Vogel, R.—*Ueber Cer-Aluminiumlegierungen;* [The cerium-aluminum alloys].—Zts. f. anorgan. Chemie, Vol. 75, No. 1, 1912; p. 41-57*; $1.20.

Weber, O.—*Messing;* [Brasses for various uses].—S. W. Deu. Industrie Ztg., Sept. 7,1912; p. 516; 1000 w; 35c.

Wingfield, C. H. and Wm. Ramsey.—*The Corrosion of Bronze Propellor Blades.*—Engnrg., June21,1912; p. 837; 1000 w; 35c.

Weiss, P.—*The Magnetic Properties of the Alloys of the Ferromagnetic Metals Iron-Nickel, Nickel-Cobalt, Cobalt-Iron.*—Internatnl. Asso. f. Testg. Materials, Vol. II, No. 11, 1912; 12 pp; 95c.

———. *A New Bronze;* ["Universal" bronze].—Canadian Engr., Oct.31, p. 679; 1000 w; 35c.

———. *El Vanadio y sus Aleaciones;* [Vanadium and its alloys].—Revista Minera, Nov.1,1912, p. 511; 1500 w; 30c.

———. *Manipulation du Ferro-Silicium Riche;* [The handling of rich ferro-silicon; principles to be adopted for protection against the dangers that may result in the handling of ferro-silicon].—Journal du Four Electriq., Dec.1,1912, p. 508; 300 w; 35c.

———. *Neue Legierungen;* [Some new industrial alloys].—Giesserei Ztg., Oct.15, p. 638; 500 w; 35c.

———. *The International Exhibit of Non-Ferrous Metals;* [Royal Agricultural Hall, Islington; 1912].—Engnrg., June21, 1912; p. 831; June28, p. 879; 4500 w; 50c.

———. *The Magnetic Properties of Alloys;* [Symposium before Faraday Society].—Met. & Chem. Engg., July,1912; p. 402; 2500 w; 35c.

ANTIMONY

Anderson, G. E.—*South China Antimony Industry.*—U. S. Consul. Rep., June26,1912; p. 1332; 600 w; 20c.

Borchers.—*Metallurgic Progress, Aachen* 1902-1912; [in German].—See Aluminum.

Carne, J. E.—*Antimony Mining in New South Wales.* (Bull. No. 16, Min. Res. Series, N. S. W.; abstract).—M. & S. P., Dec.7,1912; p. 728; 800 w; 20c.

Hess, F. L.—*The Production of Antimony, Arsenic, Bismuth and Selenium in* 1911.—U. S. Geol. Survey, Mineral Resources f. 1911: 1912; 6 pp.; 20c.

Heusler, Dr. F.—*The Properties of the Alloys of Manganese with Boron, Arsenic, Antimony, Bismuth and Tin.*—Tr. Faraday Soc., Oct.,1912; 5 p.; 75c.

Hooper, H. E.—*Estimation of Arsenic and Antimony* [in speisses, slags, mattes, and concentrates].—E. & M. J., Oct.12, p. 706; 2100 w; 25c.

Howard, L. O.—*"Ben Harrison" Concentrating Plant;* [Sumpter district, Oreg.; concentrating stibnite containing gold-silver values].—Salt Lake Mng. Rev., Oct.15, p. 16; 1200 w*; 25c.

Jiminez.—*Estadistica minera en* 1909 *y* 1910; *Peru.*—See under Copper.

Parry, L.—*Systematic Treatment of Metalliferous Wastes;* [Lead, tin, antimony, copper, nickel and zinc].—London, 1912; 121 pp.; $2; (book).

Rebeyrol.—*World's Metal Markets in* 1910; [in French].—See Nickel.

Sander.—*Palladium-Antimony Alloys.*—See under Alloys.

Schoch, E. P., and D. J. Brown.—*Electroanalysis of Copper, Antimony, Bismuth and Tin with Acidified Chlorid Electrodes.*—8th Internatnl. Congr. of Appl. Chem'y, Vol. 21, pp. 81-91.

Wagenmann, K.—*Das System Bleiglanz-Antimonglanz und die Laugerei antimonhaltiger Bleiglanze;* [Lead-antimony sulphides in pig-lead, and the leaching of antimony-bearing lead sulphides].—Metallurgie, Aug.22,1912; pp. 518-523*; Sept.8, pp. 537-543*; 95c.

Wang, C. Y.—*The Antimony Industry of China.*—E. & M. J., Oct.26, p. 777; 1000 w*; 25c.

———. *Antimony Production;* [Possibilities of smelter at Tacoma for Vault Creek, Alaska, ores].—M. & S. P., Oct.19, p. 489; 500 w; 20c.

———. *Die Antimondarstellung nach dem Reduktionsverfahren auf den Antimonhütten von Blesle;* [Reduction process for antimony at the Blesle antimony works, France; from Rev. Scientifiq., 1911, No. 14].—Oestr. Zts. f. Berg- & H-wesen, May25, 1912; p. 293; 600 w; 45c.

———. *Le marché de l'antimonie doit être en France;* [Reasons why the antimony market should be in France (Havre)].—Echo d. Mines, June13,1912; p. 695; 750 w; 35c.

CHROMIUM

Borchers.—*Metallurgic Progress, Aachen,* 1902-1912; [in German].—See Aluminum.

Bornemann, K.—*Die binären Metallegierungen;* [The binary alloys; 18: Chromium; with iron, cobalt, and nickel].—Metallurgie, June8.1912; pp. 346-353*; 50c.

Demorest, D. J.—*The Determination of Chromium and Vanadium in Steel.*—Jnl. Ind. & Eng. Chem., Dec.,1912; p. 895; 750 w; 75c.

Denis, T. C.—*Annual Report, Quebec Dept. of Mines for* 1911.—See Copper.

Gerreau.—*Rare Metals in Spain.*—See under Tungsten.

Maufe, H. B. and Lightfoot.—*The Geology of the Country Around Selukwe.*—Geol. Survey of South Rhodesia, Rep. f. 1911; pp.

—; $1. Abstract in S. Afr. Mng. Jnl., Aug. 31,1912; p. 989; 3000 w; 35c.

Phalen, W. C.—*Prospecting for Chromium Ore.*—M. & S. P., Sept.28,1912; p. 400; 2300 w; 20c.

Phalen, W. C.—*Production of Chromic Iron Ore in* 1911; [California; also notes on deposits in Rhodesia, New Caledonia and Macedonia].—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 10 pp; 10c.

Piña de Rubies, D. S.—*Determinacion del hierro al estado ferroso en las cromitas (ferro-cromo);* [Determination of ferrous iron in chromite and ferro-chrome].—Rev. Minera, Aug.8,1912; p. 377; 1000 w; 35c.

MANGANESE

Bornemann, K.—*Manganese Binary Alloys.*—See under Alloys.

Bornhardt, —. *Die Erzvorkommen des Rheinischen Schiefergebirges;* [Geology of the commercial iron and manganese ore bodies of the Rhenish slate formations; read to Ges. Deu. Metallhütten & Bergleute; abstract].—Deu. Bergwerks Ztg., Oct.1, p. 1; 750 w; 35c.

Burchard, E. F.—*Manganese and Manganiferous Ores in* 1911; [Manganese ore production, chiefly California, Virginia; manganiferous ore, Colo., Arkansas, Lake Superior; ferro and spiegel; foreign manganese deposits (Russia, India, W. Indies, Brazil, Mexico)].—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 20 pp.; 20c.

Hautpick, E. de.—*Russian Manganese;* [Chiaturi and Nikopol districts].—Mng. Jnl., July27,1912; p. 748; 600 w; 35c.

Heusler, Dr. F.—*The Properties of the Alloys of Manganese with Boron, Arsenic, Antimony. Bismuth and Tin.*—Tr. Faraday Soc., Oct.,1912; 5 p.; 75c.

Holloway, G. T.—*The Valuation of Manganese Ores;* [Read to Instn. of Mng. & Met'l'gy; abstract].—Iron & Coal Trades Rev., May31,1912; p. 881; 1000 w; 35c.

Lindum, F.—*Manganese-Copper Alloys;* [from "Southern Machinery"].—Mechl. World, Aug.23,1912; p. 92; 1500 w; 35c.

Lovejoy, E.—*Emploi du manganèse pour la coloration des briques;* [Use of manganese for coloring bricks; from "Brick"]. —Rev. d. Matériaux, June,1912; p. 65-B; 3000 w; 65c.

d'Ossat, G. de Angelis.—*Giacimento ferro-manganesifero presso S. Pietro, Fabro, Umbria;* [Manganese-iron ore deposits near S. Pietro, Italy].—Rassegna Mineraria, June 11,1912; p. 325; 1200 w; 35c.

———. *Die Manganproduktion Spaniens;* [Manganese industry of Spain].—Erzbergbau, June1,1912; p. 192; 500 w; 35c.

———. *Eisen- und Manganerze im Brasilien;* [Iron and manganese ores of Brazil]. —Riga Industrie Ztg., May15,1912; p. 139; 500 w; 35c.

———. *Manganese; Its Production and Uses.* (Bulletin 427, U. S. Geol. Surv.; abstract).—Mg. & Eng. World, Dec.14,1912; p. 1082; 700 w; 10c.

———. *Russian Manganese Industry;* [Report of British consul for 1909-1911].—Iron & Coal Trades Rev., May24,1912; p. 842; 1000 w; 30c.

———. *The Nova Scotia Manganese Co., Ltd.;* [Deposits, geology and mining at New Ross].—Canadian Mng. Jnl., Sept.15, 1912; p. 659; 2700 w; 35c.

MOLYBDENUM

Ackerman, Eug.—*Examen du marché de divers métaux;* [The world's metal markets; molybdenum].—Métaux & Alliages, Sept., 1912; 2 pp.; 50c.

Bancroft, J. A.—*Report on the Geology and Mineral Resources of Keekeek and Kewagama Lakes Region.*—Quebec Dept. Mines Report for 1911; 1912; p. 160-207*; $1.

Borchers.—*Metallurgic Progress, Aachen,* 1902-1912; [in German].—See Aluminum.

Bornemann, K.—*Molybdenum Binary Alloys.*—See under Alloys.

Dahms.—*Ores in Acidic Rocks, German S. W. Africa;* [in German]. See under Tin.

Gerreau.—*Rare Metals in Spain.*—See under Tungsten.

Hess, —. *Molybdenum in* 1911.—See Tungsten.

Meuskens, Cl.—*Flotation Process of Minerals Separation, Ltd.* [in German].—See Zinc.

Wood, H. E.—*The Wood Flotation Process;* [With tests on molybdenum, lead, zinc, copper, gold, silver, bismuth, antimony and other ores].—Amer. Inst. Mng. Engrs., Bull. 71; Nov.,1912; pp. 1227-1244*; $1.15.

———. *Concentration of Molybdenite Ores;* [Notes on Australian practice].—Mng. & Engg. Rev., May,1912; p. 336; 500 w*; 35c.

———. *Ore Deposits Around Vancouver;* [Chiefly copper and molybdenite].—B. C. Mng. & Engg. Record, April,1912; p. 262; 1600 w; 35c.

TITANIUM

Adkins, W. J.—*Pure Titanium.*—El. Rev. (London), Nov.1, p. 692; 400 w; 35c.

Böggild, O. B.—*Krystallform und Zwillungsbildungen des Kryoliths, des Perowskits, und des Boracites;* [Crystal form and twinning of cryolite, perowskite and boracite; from "Meddelser on Grönland," Vol. 50].—Zts. f. Krystallogr., April,1912; pp. 349-429*; 75c.

Borchers. — *Metallurgic Progress at Aachen,* 1902-1912; [in German].—See Aluminum.

Dulieux, E.—*The Titaniferous Ores and Magnetic Sands on the North Shore of the St. Lawrence;* [near 7-Islands Bay, Quebec].—Canadian Mng. Jnl., July1,1912; p. 450; 1400 w*; 25c.

Hess, —. *Titanium in* 1911.—See Tungsten.

Jennings, E. P.—*A Titaniferous Iron-Ore Deposit in Boulder County, Colo.*—Amer. Inst. Mng. Engrs., Bull. 70, Oct.,1912; pp. 1045-1057*.

Stansfield, A.—*Electric Smelting of Titaniferous Ores.*—Canadian Mng. Jnl., July1, 1912; p. 448; 1800 w; 25c.

Stoughton, B.—*Notes on Titanium and on the Cleansing Effect of Titanium on Cast Iron;* [Includes extensive titanium bibliography].—Amer. Inst. Mng. Engrs., Bull. 71, Nov.,1912; pp. 1245-1276; $1.15.

Thornton, W. M.—*Estimation of Titanium in the Presence of Iron.*—Amer. Jnl. of Sci., Aug.,1912; p. 214-218; 65c.

TUNGSTEN

Ackermann, E.—*Uran, Wolfram und Eisenerze in Portugal;* [Uranium and tungsten

deposits of Portugal].—Chemiker Ztg., July 20,1912; p. 833; 400 w; 35c.

Baragwanath, W.—*Lintons, Vict., Wolfram Lodes.*—Australian Mng. Standd., Sept. 5,1912; p. 225; 600 w; 35c.

Von Bonhorst, C.—*Uran-, Wolfram- und Eisenerze in Portugal;* [Uranium, tungsten and iron ores of Portugal].—Chemiker Ztg., June18,1912; p. 689; 1000 w; 35c.

Bornemann, K.—*Tungsten Binary Alloys.*—See under Alloys.

Carne, J. E.—*Tungsten Mining Industry of New South Wales.*—N. S. W. Geol. Survey, Memoirs; 1912; pp. —; $2 (book)

Carne, J. E.—*The Tungsten Mining Industry in New South Wales.*—N. S. Wales Geol. Survey, Mineral Resources Publ. No. 15; 1912; 100 pp.*; 95c.

Coolidge, W. D.—*Metallic Tungsten and Some of Its Applications.*—Amer. Inst. Electr. Engrs., Proc., June,1912; pp. 865-874; $1.15.

Dahms.—*Ores in Acidic Rocks. German S. W. Africa;* [in German]. See under Tin.

Erhard, G.—*Ueber Darstellung von Wolframmetal;* [Process of metallic tungsten production, in powder form, at the Schmiedeberg works, Germany].—Metallurgie, July22,1912; p. 441; 4000 w; 50c.

Friedensburg.—*Mining Industry in Cornwall and Devonshire;* [in German].—See Tin.

Gerreau, G.—*Les minerais rares en Espagne;* [Rare metals in Spain; chromium, vanadium, tungsten, molybdenum; abstract of Belgian consular report].—Echo d. Mines, June10,1912; p. 678; 400 w; 35c.

Fink, C. G.—*Ductile Tungsten;* [Uses and preparation; read to Internatnl. Congr. of Appl. Chem'y].—Met. & Chemi. Engg., Sept. Suppl.; 1912; p. 580; 1000 w; 35c.

Harrington, C. L.—*Mineral Resources of South America.*—See under Copper.

Hess, F. L.—*The Production of Tungsten, Vanadium, Uranium, Titanium, Molybdenum, Nickel, Cobalt, and Tantalum in* 1911.—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 24 pp.; 10c.

Hess, F. L.—*Carnotite near Green River, Utah.*—U. S. Geol. Survey, Bull. 530-K; 1912; pp. 18-21; 10c.

Hills, Victor G.—*Tungsten and the Scheelite Mines in Nova Scotia.*—Jnl. Mg. Soc., N. S., Vol. XVII, 1912; p. 55; 6 p.*; 50c.

Hills, V. G.—*Scheelite Deposits of Nova Scotia;* [Read to Canadian Mng. Inst.; abstract].—Canadian Mng. Jnl., Oct.1, p. 679; 800 w; 25c.

Jimenez.—*Estadistica minera en* 1909 *y* 1910, *Peru.*—See under Copper.

Martell.—*Mining in Bolivia.*—See Tin.

Morris, H. C.—*Prospecting for Tungsten;* [Occurrences, chemical tests, and milling practice].—M. & S. P., June29,1912; p. 885; 1000 w; 20c.

Pickings, H. B.—*Tungsten Milling Practice in Nova Scotia.*—Mining & Engg. World, July13,1912; p. 60; 400 w; 10c.

Rosenheim, A.—*Die Konstitution der Metawolframate;* [Constitution of the metatungstates: reply to H. Copaux].—Zts. f. anorgan. Chemie, 1912, No. 2; pp. 141-144; $1.15.

Stiles, A. M.—*Deertail Mining District;* [Stevens county, Wash.].—N. W. Mng. News, Nov., p. 15; 700 w; 30c.

———. *Patterson Creek Tungsten, Idaho.*—Salt Lake Mng. Rev., Aug.30, p. 18; 300 w; 25c.

———. *Queensland,* 1911.—Mng. Jnl., Aug.3,1912; p. 767; 2000 w; 35c.

———. *Tin and Wolfram in Spain and Portugal.*—Malayan Tin & Rubber Jnl., June24,1912; p. 9; 1600 w; 35c.

———. *West Country Mineral Statistics;* [Cornwall and Devon; output by companies, 1911; complete statistics for 1910].—London & W. Country Chamber of Mines, Records, July,1912; pp. 4-8; 75c.

URANIUM

See also Radium.

Ackermann, E.—*Uran, Wolfram und Eisenerze in Portugal;* [Uranium and tungsten deposits of Portugal].—Chemiker Ztg., July 20,1912; p. 833; 400 w; 35c.

von Bonhorst, C.—*Uran-, Wolfram- und Eisenerze in Portugal;* [Uranium, tungsten and iron ores of Portugal].—Chemiker Ztg., June18,1912; p. 689; 1000 w; 35c.

Fischer, S.—*Extraction of Vanadium from Carnotite and Vanadiferous Sandstone Concentrates;* [from Utah and Colorado].—Met. & Chemi. Engg., Aug.,1912; p. 469; 2500 w; 35c.

Friedensburg.—*Mining Industry in Cornwall and Devonshire;* [in German].—See Tin.

Glaser, Fr.—*Ueber die Bewertung und technische Verarbeitung von Uranglimmer,* [The preparation and extraction of radium from uranmica (torbernite)].—Chemiker Ztg., Oct.8, p. 1166; 2000 w; 35c.

Griffin, C. E.—*Chemical Estimation of Uranium and Vanadium.*—Mining & Engg. World, Aug.10,1912; p. 247; 2500 w; 10c.

Henglein, M.—*Uranmineralien auf Erzgängen im badischen Schwarzwald;* [Uranium minerals in the cobalt-silver and other veins of the Black Forest, Baden].—Zts. f. prakt. Geologie, Aug.,1912; p. 325; 750 w; 75c.

Hess, —. *Uranium in* 1911.—See Tungsten.

van Melckebeke, R.—*Examen de divers composés d'urane;* [Examination of various uranium compounds as to radio-activity; read to Anvers section; abstract].—Soc. Chimiq. Belgiq., Bull., July,1912; p. 350; 400w; 65c.

Mixter, W. G.—*Heat of Formations of the Oxides of Vanadium and Uranium.*—Amer. Jnl. of Sci., Aug.,1912; pp. 141-156*; 65c.

Müller, E., and O. Diefenthäler.—*Massanalytische Bestimmung der Vanadinsäure mit Ferrocyankalium;* [Quant. estimation of vanadic acid and vanadates by means of potassium ferrocyanide].—Zts. f. analyt. Chemie, 1912, No. 1; pp. 21-23; 1000 w; 65c.

Schmidt, Alb.—*Radioaktives aus dem Fichtelgebirge;* [Uranium and radioactive deposits of the Fichtel Mts. region, Germany].—Berg. & Hüttenm. Rundschau, Aug. 5,1912; p. 783; 2500 w; 35c.

———. *Carnotite in Utah;* [Recent developments].—E. & M. J., Aug.17,1912; p. 292; 700 w*; 25c.

———. *Tungsten Mines Near Spokane.*—M. & S. P., Aug.10,1912; p. 178; 1000 w*; 20c.

VANADIUM

Cain, J. R. and J. C. Hostetter.—*Rapid Method for Determination of Vanadium in Steels, Ores, etc.*—U. S. Bur. Standards,

Technologic Paper No. 8; 1912; 20 pp.; 50c.

Clifford, J. O.—*Notes on Vanadium;* [Occurrences, chemistry and uses].—Mex. Mng. Jnl., Sept.,1912; p. 19; 4800 w; 25c.

Demarest, D. I.—*A New Method for the Determination of Vanadium;* [From Jnl. of Ind'l & Engg. Chem'y, April,1912].—Mining & Engg. World, Aug.24,1912; p. 346; 500 w; 10c.

Demorest, D. J.—*The Determination of Chromium and Vanadium in Steel.*—Jnl. Ind. & Eng. Chem., Dec.,1912; p. 895; 750 w; 75c.

Fischer, S.—*Extraction of Vanadium from Carnotite and Vanadiferous Sandstone Concentrates;* [from Utah and Colorado].—Met. & Chemi. Engg., Aug.,1912; p. 469; 2500 w; 35c.

Gerreau.—*Rare metals in Spain.*—See under Tungsten.

Griffin, C. E.—*Chemical Estimation of Uranium and Vanadium.*—Mining & Engg. World, Aug.10,1912; p. 247; 2500 w; 10c.

Harrington.—*South America.*—See Copper.

Hess, —. *Vanadium in* 1911.—See Tungsten.

Hess, F. L.—*Notes on the Vanadium Deposits near Placerville, Colo.*—U. S. Geol. Survey, Bull. 530-K; pp. 3-17*; 10c.

Hess, F. L.—*Carnotite near Green River, Utah.*—U. S. Geol. Survey, Bull. 530-K; 1912; pp. 18-21; 10c.

Hess, F. L.—*Vanadium in the Sierra de los Caballos, N. Mex.*—U. S. Geol. Survey, Bull. 530-K; 1912; pp. 22-25; 1800 w; 10c.

Hess, F. L.—*Prospecting for Vanadium.*—M. & S. P., Sept.21,1912; p. 366; 2400 w; 20c.

Jimenez.—*Estadistica minera en* 1909 *y* 1910; *Peru.*—See under Copper.

Jones, H.—*Copper and Vanadiferous Copper Deposits, Beltana, S. Australia.*—Australian Mng. Standd., July4,1912; p. 7; 800 w; 35c.

Mixter, W. G.—*Heat of Formations of the Oxides of Vanadium and Uranium.*—Amer. Jnl. of Sci., Aug.,1912; pp. 141-156*; 65c.

———. *Carnotite in Utah;* [Recent developments].—E. & M. J., Aug.17,1912; p. 292; 700 w*; 25c.

———. *El Vanadio y sus Aleaciones;* [Vanadium and its alloys].—Revista Minera, Nov.1,1912; p. 511; 1500 w; 30c.

———. *El vanadio;* [Notes on vanadium occurrences in Mexico, Peru and U. S.].—Mex. Mng. Jnl., Oct.,1912; p. 56; 1000 w; 25c.

———. *Le vanadium et ses alliages, l'acier au vanadium;* [Vanadium and its alloys, vanadium steel].—La Revue Industrielle, Nov.2,1912; p. 10; 1200 w; 25c.

———. *Vanadium in Colorado.*—E. & M. J., Aug.24,1912; p. 341; 400 w; 25c.

———. *Vanadium in Chile, Argentina and Peru.*—U. S. Consul Rep., Aug.21,1912; p. 935; 400 w; 20c.

———. *Vanadium in Chile, Argentina and Peru.*—Mining & Engg. World, Oct.12, p. 676; 600 w; 10c.

CHAPTER VI.

Tin, Nickel, Cobalt, Aluminum.

TIN.

Anderson, G. E.—*Boom in Chinese Tin;* [First half of 1912].—U. S. Consul. Rep., Sept.7,1912; p. 1246; 600 w; 20c.

Birch, Sir. E. W.—*Mineral Wealth of the Malay States;* [Mining and smelting conditions; chiefly tin; read to Roy. Colonial Inst., London].—Australian Mng. Standd., Aug.15,1912; p. 155; 1500 w; 35c.

Brash, R. P.—*Meglembu Lode Synd., Ltd., Mines, Perak;* [Visit of inspection by Perak Chamber of Mines; discussion of possibilities in lode mining].—Malay Tin & Rubber Jnl., May20,1912; 4-page supplement; 50c; June3, p. 12; 500 w; 50c.

Brock, R. W.—*Tin and Topaz in New Brunswick.*—Jnl. Mg. Soc., N. S., Vol. XVII, 1912; p. 50; 4 p.; 50c.

Brooks, A. H.—*The Alaska Mining Industry in* 1911.—U. S. Geol. Survey, Bull. 520-A; 1912; 90 pp*; 20c.

Brown, G. E.—*An Unusual Zonal Arrangement of Tin Ore in a Vein;* [Surface zone of oxidized workable tin overlying zone of silver ore, east of Lake Poopo, Oruro district, Bolivia].—Mng. Jnl., June15,1912; p. 611; 1600 w*; 35c.

Calvert, A. F.—*Map of the Bauchi, Zario and Kano Tin Fields, Northern Nigeria.*—London, 1912 (Map).

Cameron, W. E.—*The Tin Lodes of Sandy Creek, Charters Towers District.*—Queensland Geol. Survey, Publ. No. 235; 1912; pp. 40-43.

Caracristi, C. F. Z.—*The Mines of Bolivia;* [Tin mining conditions].—Mex. Mng. Jnl., Aug.,1912; p. 19; 2700 w*; 25c.

Carne, E. J.—*The Tin Mining Industry and the Distribution of Tin Ores in New South Wales;* [Extracts on tin occurrences; abstract from N. S. W. Geol. Survey report].—Mines & Minerals, July,1912; p. 746; 2800 w; 35c.

de Castro, —. *Le miniere de stagno di Campiglia;* [The tin ores of maritime Campiglia, Pisa, Italy].—Rassegna Mineraria, Oct.21, p. 219; 1000 w; 35c.

Crispo, D.—*Dosage de l'étain dans le fer-blanc;* [Estimation of tin in white metal].—Etudiants Inst. Meurice, Bull. No. 1, 1912; pp. 150-152.

Dahms, —. *Ueber Erzlagerstätten in sauren Eruptivgesteinen Deutsch-Südwestafrikas;* [The occurrence of ore deposits in acidic eruptive rocks—diabase, pegmattites and granite—in German S. W. Africa (tin, monazite, tantalite, tungsten, Molybdenum, copper)].—Zts. f. prakt. Geol., June,1912; pp. 240-247; 75c.

Down, T. A.—*Mining in the Tavistock-Calstock District;* [W. of England].—Mng. Jnl., Aug.31,1912; p. 871; 1000 w; 35c.

Duncan, G. S.—*Contribution to the Study of Pre-Cambrian Rocks of the Harney Peak District of S. Dakota;* [Mica and tin-bearing granites, and pegmatite and quartz lenses].—Amer. Inst. Mng. Engrs., Bull. 67, July,1912; pp. 751-762*; $1.15.

Falconer, J. D.—*Nigerian Tin; Its Occurrence and Origin.*—Economic Geol'y, Sept.,1912; pp. 542-546; 65c.

Fawns, S.—*Tin Deposits of the World;* [Mineralogy, geology, alluvial mining, dredging; crushing and dressing; assaying; smelting; Malay, E. Indies, India, Indo-China, China, Bolivia, Africa, Cornwall, Mt. Bischoff mine, Tasmania, New South Wales, etc., Australia, Europe, Mexico, U. S., Alaska, etc.].—London, 1912; $5.50 (book).

Fern, H. E.—*Working Costs of* 8 *Cornish Mines for* 1911; [Leading companies].—London & W. Country Chamber Mines, Records; July,1912; chart; 75c.

Friedensburg, Dr.—*Der Erzbergbau in Cornwall und Devonshire;* [The mining industry in Cornwall and Devonshire; reviews geology, mines, mining and milling, and production of tin, copper, arsenic, tungsten, uranium].—Glückauf, June29, 1912; p. 1029-1041*; 50c.

Furner, G. H.—*The Zaaiplaats Tin Mines.*—S. Afr. Mng. Jnl., Anniversary No., Sept., 1912; p. 320; 1500 w*; $1.

Gascoyne, R.—*First Half-Year's Mining in the Transvaal,* 1912.—Mining & Engg. World, Oct.21, 1912; p. 669; 1600 w; 10c.

Goodchild, W. H.—*Valuation of Base-Metal Mines.*—Mng. Mag., July,1912; p. 50; 2100 w; 45c.

Grist, A. A. W.—*Nigeria, the Coming Tin Field; Hints to Miners and Prospectors;* [on regulations and ore occurrences].—Mng. World (London), Oct.26, p. 488; 1800 w; 35c.

Harrington, C. L.—*Mineral Resources of South America.*—See under Copper.

Hess, F. L.—*Tin Resources of Alaska.*—U. S. Geol. Surv., Bull. 520-B; 1912; 6 pp.; 1500 w; 10c.

Hess, F. L.—*The Production of Tin in* 1911; [Chiefly Alaska and Texas; also describes deposits in Cal., Car., Conn., Conn., Idaho, Me., Mass., Mont., N. Hamp., S. Dak., Va., Wash.; secondary tin; bibliography].—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 12 pp; 10c.

Heusler, Dr. F.—*The Properties of the Alloys of Manganese with Boron, Arsenic, Antimony, Bismuth and Tin.*—Tr. Faraday Soc., Oct.,1912; 5 p.; 75c.

Houben, —. *Solubility of Oxides and Sulphides in Molten Salt;* [in German].—See Zinc.

Keating, John.—*Prospecting for Tin in Nigeria.*—Mg. Mag., Nov.,1912; p. 363; 1000 w*; 45c.

Keyzer, S. S.—*Cape Tin Deposits.*—S. Afr. Mng. Jnl., Sept.28, p. 119; 400 w; 35c.

Keyzer, S. S.—*Cape Alluvial Tin;* [Kuils river region].—S. Afr. Mng. Jnl., July13, 1912; p. 743; 500 w; 35c.

Lamb, M. R.—*Bolivian Tin Mining;* [Discusses general operating conditions and examination of properties].—E. & M. J., Aug. 10,1912; p. 271; 2500 w*; 25c.

Lines, G. L.—*Tin Lodes at Wodgina, Western Australia.*—W. A. Mng. etc. Jnl., Aug.31, p. 8; 1200 w; 35c.

Macnamara, J. C. and H. E. Fern.—*Alluvial Mining on Goss Moor, Cornwall.*—Mng. Mag., July,1912; p. 46; 2000 w*; 45c.

Martell, P.—*Der Erzbergbau in Bolivien;* [Mining industry in Bolivia; chiefly tin; also silver, tungsten].—Zentral Verbd. Bergbau Betriebsl. Oestr., Oct.15, p. 649; 2200 w; 35c.

Maufe, H. B.—*The Geology of the Victoria Tin Field.*—Geol. Surv. of South Rhodesia, Report f. 1911; pp. —; $1.

Mennicke, Dr. Hans.—*Fortschritte in der Metallurgie des Zinns während der Jahre* 1910-11; [Advances in the metallurgy of tin in 1910 and 1911].—Elektrochemische Zts., Oct.,1912, p. 184; 2500 w; 75c.

Mennicke, H.—*Fortschritte in der Metallurgie des Zinns während,* 1910-11; [Progress in the tin industry in 1910-11; ore occurrences, markets, milling, metallurgy].—Elektrochem. Zts., May,1912; p. 31; June, p. —; 4000 w; 50c.

Miller, A. M.—*Mining in Swaziland;* [Gold and tin].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 130; 2000 w*; $1.

Moline, A. H. P.—*Sluicing for Tin; the Y. Water Co., Ltd.;* [at Emmaville, N. S. W.].—Mng. & Engg. Rev., Oct., p. 9; 500 w*; 35c.

Moore, W. A.—*Electricity in Alluvial Tin Working.*—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 117; 1500 w*; $1.

Neumann, B.—*Das Metallhüttenwesen im Jahre* 1911; [Review of metallurgy in 1911; 1: Copper; 2: zinc, cadmium, tin, lead; 3: antimony, arsenic, bismuth, nickel, cobalt, platinum, mercury, silver, gold, aluminum].—Glückauf, Sept.2,1912; pp. 1529-1536; (2) Sept.28, pp. 1569-1579; (3) Oct.5, pp. 1613-1623; 95c.

Niess, Dr.—*Der Zinnerzbergbau im Bergamtsbezirk Windhuk;* [Tin mining and tin resources in the Karibib, Omaruru and Swakopmund districts, German SW. Africa].—Berg- & Hüttenm. Rundschau, Oct. 20, p. 21; 600 w; 35c.

Parry, L.—*Treatment of Metal Wastes.*—See under Antimony.

Parks, H. M.—*Tin at Grants Pass, Oregon;* [Discredits the reports].—M. & S. P., Aug.10,1912; p. 181; 500 w; 20c.

Patrick, W. W., and G. C. Wilsnack.—*A New Volumetric Method for Tin.*—Jnl. of Ind'l & Engg. Chem'y, Aug.,1912; p. 597; 2000 w; 65c.

Rangel, M.—*Tin Deposits of Durango;* [From Camara Minera Mex., Bol., March, 1912].—E. & M. J., Aug.31,1912; p. 407; 400 w; 25c.

Rebeyrol.—*World's Metal Markets in* 1910; [in French].—See Nickel.

Rickard, E.—*An Excursion in Cornwall.*—Mng. Mag., Aug.,1912; p. 126; 2100 w*; 45c.

Rigaud, F.—*Alluvions métallifères;* [Geology, prospecting and development of placer deposits].—Rev. Univ. d. Mines, May, 1912; 53 pp.*; $1.15.

Ruthenburg, M.—*New Method of Dressing Cornish Tin Ores;* [Ruthenburg electromagnetic separator].—Met. & Cheml. Engg., July,1912; p. 411; 1500 w*; 35c.

Schoch and Brown.—*Electroanalysis with Acidified Chlorid Electrodes.*—See Antimony.

Söhnlein, M. G. F.—*Bolivian Tin Mining;* [Ore Dressing].—E. & M. J., Oct.19, p. 727; 500 w; 25c.

Steinhart, O. J.—*Cornish Tin Ticketing;* [Valuation of tin ores].—Mng. Mag., June, 1912; p. 430; 500 w; 45c.

Symons, B.—*Mulberry Tin Mines;* [Lanivet, Cornwall].—Mng. Jnl., Sept.28,1912; p. 961; 1000 w; 35c.

Treloar, A. and E. Walker.—*Cornish Tin Ticketing;* [Methods in selling tin concentrates].—Mng. Mag., Sept.,1912; p. 219; 1000 w; 35c.

Van Brussell, J. B.—*Magnetic Dressing of Tin Ores.*—E. & M. J., Nov.23,1912; p. 988; 1500 w*; 25c.

Walker, E. W.—*Hints on Assaying of Tin.*—Mg. & Eng. Rev., Nov.5,1912; 1200 w; p. 71; 35c.

Walker, Edw.—*Extraction of Tin from Ores;* [Richards vs. other methods].—M. & S. P., Oct.26, p. 528; 300 w; 20c.

Wasson, Albert.—*Treatment of Tin Ore in Cornwall.*—E. & M. J., Nov.23,1912; p. 979; 1200 w; 25c.

Wile, R. S.—*An Electric Furnace for Treatment of Tin Dross, Concentrates from Cyanide Mills and Other Metallurgical Work.*—Met. & Cheml. Engg., Aug.,1912; p. 495; 1000 w*; 35c.

Woodward, Harry P.—*The Poonah Tin Field, W. Aust.*—W. A. Mg., B. & Eng. Jnl., Oct.19,1912; p. 12; 2500 w; 35c.

Woodward, H. P.—*Coodardy Gold and Tin District, Western Australia.*—Mng. & Engg. Rev., Oct.,1912; p. 21; 800 w; 35c.

"Miner."—*Personnel in Nigeria.*—Mng. Jnl., Oct.12, p. 1010; 1200 w; 35c.

———. *A Mining Tour of Cornwall;* [Visit of inspection of scientific, mining and engineering societies to tin and china-clay centers].—Mng. World (London), July 20,1912; p. 79; 9000 w; 35c.

———. *Briseis;* [Report for 1911].—Australian Mng. Standd., July4,1912; p. 5; 3000 w; 35c.

———. *Briseis Co., Tasmania;* [Abstract from 1911 report on costs of tin sluicing, and output].—E. & M. J., July 20,1912; p. 113; 300 w; tables; 25c.

———. *Calabashing;* [Tin panning practice in West African streams, using calabash gourd].—Mng. Mag., July,1912; p. 23; 1000 w*; 35c.

———. *Cornish Tin Mining;* [History of tin and copper production, Dolcoath].—Canadian Mng. Jnl., Aug.1,1912; p. 521; 1000 w; 25c.

———. *Das Vorkommen von Zinnerzen in Südwestafrika;* [Tin deposits of German Southwest Africa].—Bergbau, July25,1912; p. 424; 750 w; 35c.

———. *Dredging in New South Wales.*—Mng. World (London), July13,1912; p. 51; 500 w; 35c. Review of report for 1911 in Mng. Mag., July, p. 52; 400 w; tables; 45c.

———. *Extraction Problems;* [Chiefly with reference to tin].—Mng. Mag., Oct., p. 251; 1000 w; 45c.

———. *F. M. S. Mines in* 1911; [Review of report of Malay senior warden of mines].—Mng. Jnl., June29,1912; p. 644; 1000 w; 35c.

———. *Glance at Cornwall's Tin History.*—Mng. World (London), Nov.9, p. 554; 750 w; 35c.

———. *Latest from the Tin Fields;* [New pipe at Roodepoort].—S. Aft. Mng. Jnl., June29.1912; p. 647; 1000 w; 35c.

———. *Le Traitement Electrique des Minerais d'Etain;* [The electric treatment of tin ores].—Revue Industrielle, Nov.9, 1912; p. 15; 900 w; 25c.

———. *Malay Mine Outputs;* [Statistics monthly, by mines, June, 1911-June, 1912].—Malay Tin & Rubber Jnl., July22, 1912; p. 32; tables; 35c.

———. *Mining in the Stanthorpe District;* [Rover tin mines and sluicing].

—Queensland Govt. Mng. Jnl., Aug.,1912; p. 370; 1500 w*; 35c.

———. *Mines and Mining in ...na.* —China Yearbook, 1912; pp. 50-54.

———. *Northern Nigeria; Shen District.*—S. Afr. Mng. Jnl., July13,1912; p. 697; 2500 w; 35c.

———. *Northern Nigeria; The Ninghi District.*—Mng. Jnl., July27,1912; p. 742; 1500 w; 35c.

———. *Ore Deposits in the Transvaal;* [Geology of leading types].—S. Afr. Mng. Jnl., Aug.10,1912; p. 887; 3000 w*; 35c.

———. *Our Big Mines; Examination of Their Reports; Mount Bischoff.*—Australian Mng. Standd., Aug.15,1912; p. 151; 1500 w; 35c.

———. *Progress at the Rooiberg Tin Mine.*—S. Afr. Mng. Jnl., June22,1912; p. 609; 1500 w; 35c.

———. *Queensland,* 1911.—Mng. Jnl., Aug.3,1912; p. 767; 2000 w; 35c.

———. *Swaziland Tin;* [Report for 1911-12].—S. Afr. Mng. Jnl., Sept.7,1912; p. 11; 1200 w; 35c.

———. *The Cost of Tin Production;* [Rooiberg, Groenfontein and Swaziland].—S. Afr. Mng. Jnl., Sept.28, p. 103; 1600 w; 35c.

———. *The Question of Tin Ore Reserves.*—S. A. Mg. Jnl., Nov.9,1912; p. 301; 3000 w; 35c.

———. *The Porco Tin Mines, Ltd.;* [Bolivia].—Mng. Jnl., Oct.5, p. 969; 1800 w; 35c.

———. *The Tin Industry;* [Recent Transvaal developments].—S. Afr. Mng. Jnl., July6,1912; p. 691; 1500 w; 35c.

———. *The Tin Outlook;* [Reviews Bolivian and Malayan recent developments].—Mng. Jnl., Sept.28,1912; p. 941-943; 2500 w*; 35c.

———. *The Tin Position;* [Review of markets, production and consumption; from "The Statist"].—S. Afr. Mng. Jnl., Oct.12, p. 180; 1300 w; 35c.

———. *The Transvaal Tin Deposits;* [Geology of Waterberg district].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 169; 7000 w*; $1.

———. *Tin in Sand in Cornwall.*—Mng. World (London), Oct.5,1912; p. 401; 800 w; 35c.

———. *Tin Deposits of the Cape.*—S. Afr. Mng. Jnl., Sept.14, p. 37; 1200 w; 35c.

———. *Tin Dressing Losses in Cornwall.*—Mng. Jnl., Aug.24,1912; p. 849; 800 w; 35c.

———. *Tin Dressing Losses in Cornwall.*—Mng. Jnl., Aug.3,1912; p. 786; 500w; 35c.

———. *Tin Mining in the Dutch East Indies.*—Mng. Jnl., Aug.10,1912; p. 788; 500 w; 35c.

———. *Tin Mining Industry and the Distribution of Tin Ores in New South Wales.*—N. S. W. Dept. of Mines, Mineral Resources publication No. 14; 1911; pp. —.

———. *Tin Mining at Mount Wills.*—Australian Mng. Standd., May23,1912; p. 476; 1200 w*; 35c.

———. *Tin Mining in Nigeria.*—Canadian Mng. Jnl., June15,1912; p. 403; 1800 w; 25c.

———. *Tin Outputs Up to Date;* [Leading companies in Nigeria, Malay, Cornwall, Transvaal, etc.; first 5 months, 1912].—Malay Tin & Rubber Jnl., Aug.12,1912; p. 9; 250 w; tables; 35c.

———. *Tin Ore Dressing and Metallurgy* [in New South Wales and Tasmania; crushing, concentrating, smelting].—Mines & Minerals, Sept.,1912; p. 89; 2000 w*; 35c.

———. *Tin Prices and Output;* [from London "Times," June15].—U. S. Consul. Rep., July3,1912; p. 56; 1000 w; 20c.

———. *Tin and Wolfram in Spain and Portugal.*—Malayan Tin & Rubber Jnl., June24,1912; p. 9; 1600 w; 35c.

———. *Victorian Lode Tin.*—Australian Mng. Standd., Aug.1,1912; p. 102; 1000 w; 35c.

———. *West Country Mineral Statistics;* [Cornwall and Devon; output by companies, 1911; complete statistics for 1910].—London & W. Country Chamber of Mines, Records, July,1912; pp. 4-8; 75c.

———. *Zinngeschäft der Straits Settlements* 1911; [Tin production of Straits Settlements, 1911; German consular report].—Eisen Ztg., June29,1912; p. 474; 1000 w; 35c.

Tin Plate.

Collis, E. L., and J. Hilditch.—*Conditions of Employment in the Manufacture of Tin Plates;* [Brief abstract of British Home Office "White Paper"].—Iron & Coal Trades Rev., Sept.27,1912; p. 464; 1000 w; 35c.

Grünwald, J.—*The Technology of Iron Enameling and Tinning;* [Translated from the German by H. H. Hodgson].—London, 1912; pp. —; (book).

NICKEL.

Apgar, F. W., and K. Thomas.—*Occurrence of Pentlandite in the Sudbury Ores.*—Met. & Chem. Engg., Nov.,1912; p. 744; 250 w*; 35c.

Borchers.—*Metallurgic Progress, Aachen,* 1902-1912; [in German].—See Aluminum.

Bornemann. — *Chromium Alloys.* — See Chromium.

Browne, David H.—*History of the Nickel Industry in the United States and Canada.* (Paper read before Under-graduates Society of Applied Science of McGill Univ.; abstract).—Can. Mg. Jnl., Dec.1,1912; p. 817; 3000 w; 30c.

Coleman, A. P.—*Summary Report on the Sudbury Nickel Field, Ont.;* [Progress in 1911].—Canada Dept. Mines, Mines Branch, Rep. f. 1911; p. 87-89; 1200 w.

Döring.—*Progress in Metal Analysis.* 1911; [in German].—See under Platinum.

Fischer and Stecher.—*Rapid Electroanalysis* [in German].—See Copper.

Hess, —. *Nickel in* 1911.—See Tungsten.

Hirshberg, L. K.—*U. S. Coinage of Nickel 3-ct., 1-ct. and half-cent Pieces.*—Mining & Engg. World, Sept.7,1912; p. 431; 1000 w; 10c.

Holland, A.—*Heavy Electrolytic Nickel Deposition;* [from Soc. d'Encouragem. Ind. Nat., Bull.; July,1912; brief abstract].—E. & M. J., Nov.2, p. 835; 500 w; 25c.

Hore, R. E.—*Origin of the Sudbury Nickel and Copper Deposits.*—Mining & Engg. World, June29,1912; p. 1345; 4800 w*; 10c.

Lindemann, E.—*Magnetometric Survey of a Nickeliferous Pyrrhotite Deposit in the Sudbury District.*—Canada Dept. Mines, Mines Branch, Rep. f. 1911; 1912; p. 103-104; 800 w; $1.

Maxwell, H.—*Exploring the Sudbury*

Ore Bodies.—E. & M. J., Aug.3,1912; p. 206; 400 w; 25c.

Mylius and Hüttner.—*Herstellung von reines Nickel;* [Production of pure nickel; beginning of tests at the Vienna physical-technical testing station].—Physikal.-Techn. Reichsanstalt, Vienna; Tätigkeitsber. f. March,1912; pp. —; $2.

Nola, E. di and A. Germain.—*Determinazione volumetrica del nichel;* [A volumetric method for determination of nickel].—Rassegna Mineraria, Oct.21, p. 217; 1000 w; 35c.

Parry, L.—*Treatment of Metal Wastes.* See under Antimony.

Rebeyrol, M.—*Mouvements économiques des métaux autres que le fer en* 1910; [The non-ferrous metal markets in 1910; copper, lead, zinc, tin, nickel, aluminum, antimony].—Rev. de Métall'gie, Oct.,1912; pp. 825-848*; $1.15.

Ruer, R. and K. Kaneko.—*Das System Nickel-Kobalt;* [The cobalt-nickel combinations in smelting].—Metallurgie, July8,1912; p. 419-422*; 50c.

Thomas, K.—*The Sudbury Nickel District, Ont.;* [Ore bodies].—M. & S. P., Oct. 5,1912; p. 433; 1000 w*; 20c.

Weiss, Pierre. —*The Magnetic Properties of the Alloys of the Ferromagnetic Metals.*—Trans. of the Faraday Soc., Oct., 1912; 8 p.; 75c.

———. *Canada and the Nickel Supply.*—Canadian Engr., Oct.17, p. 616; p. 618; 1200 w; 25c.

———. *Dépots électrolytiques défectueux de nickel;* [Defective electrolytic deposition of nickel].—Rev. d'Electrochimie, July, 1912; p. 199; 600 w; 45c.

———. *Herstellung von Nickelniederschlägen auf graphitierten Wachsflächen;* [Production of nickel precipitate on graphitized wax surfaces].—Galvanoplastik, May, 1912; p. 53; 500 w*; 35c.

———. *International Nickel Co.;* [New consolidation].—E. & M. J., July27,1912; p. 152; 500 w; 25c.

———. *Les exploitations minières de nickel de la Dumbéa;* [Nickel mining along the Dumbea river, New Caledonia].—Bull. du Commerce N. Calédonie, June22,1912; p. 9; 500 w; 35c.

———. *Proposed Canadian Prohibition of Nickel Export.*—Mining & Engg. World, Nov.9, p. 837; 600 w; 10c.

———. *Smoke Troubles at Sudbury.*—E. & M. J., Nov.23,1912; p. 974; 250 w; 25c.

———. *The Nickel Industry of Sudbury Division, Northern Ontario.*—Mng. World (London), Aug.10,1912; p. 170; 1000 w; 35c.

COBALT.

Borchers.—*Metallurgic Progress, Aachen,* 1902-1912; [in German].—See Aluminum.

Bornemann. — *Chromium Alloys.* — See Chromium.

Burgstaller, S.—*Untersuchungen uber die Beständigkeit der Kobaltoxyde im Intervalle von Co_2O_3 bis CoO;* [The constitution of the cobalt oxides in the interval Co_2O_3 to CoO].—Vienna, 1912; 60 pp; $2 (book).

Burgstaller, S.—*Ueber die Ursache der Färbung gewisser mit Kobaltlösung erzeugter Mineralfarben;* [Theory of pigmentation with certain of the cobalt colors].—Vienna, 1912; 21 pp; $1 (pamphlet).

Döring.—*Progress in Metal Analysis,* 1911; [in German].—See under Platinum.

Fink, C. G.—*Smelting Cobalt-Silver Ores by Vacuum Electric Furnace;* [Read to Amer. Electrochemi. Soc.; abstract].—Mining & Engg. World, Oct.5,1912; p. 627; 600 w; 10c.

Haynes, Elw.—*Cobalt Alloyed with Chromium and other Metals;* [Read to Amer. Inst. Mng. Engrs.].—Iron Trade Rev., Nov.14, p. 926; 1500 w; 20c.

Hess, —. *Cobalt in* 1911.—See Tungsten.

Krauss, V. P.—*Cobalt Driers;* [Use of cobalt compounds in paint and varnish driers; read to 8th Internatnl. Congr. of Appl. Chem'y].—Jnl. of Ind'l & Engg. Chem'y, Oct.,1912; p. 731; 2000 w; 65c.

Ruer, R. and K. Kaneko.—*Das System Nickel-Kobalt;* [The cobalt-nickel combinations in smelting].—Metallurgie, July8, 1912; p. 419-422*; 50c.

Weiss, Pierre.—*The Magnetic Properties of the Alloys of the Ferromagnetic Metals.*—Trans. of the Faraday Soc., Oct.,1912; 8 p.; 75c.

ALUMINUM.

See also under Alloys.

de Alzugary, B.—*Alterations of Aluminum and their Causes.*—Mining & Engg. World, Aug.17,1912; p. 279; 500 w; 10c.

Bairsto, G. E. and R. Mercer.—*Some Properties of Aluminium Anode-Films.*—Faraday Soc., Trans., Vol. 7, Pts. 1-2; 1911; pp. 1-29; $4.25.

Borchers, Wm.—*Forschungsarbeiten aus des ersten 10 Jahren des Instituts für Metallhüttenwesen und Elektrometallurgie Kgl. Techn. Hochschule zu Aachen;* [Review of the advanced researches made under the Dept. of Metallurgy and Electrometallurgy, Aachen Technical College, in the first 10 years of its existence; electric graphite, silicon, silicides; titanium; aluminum; cerium; zinc, copper, cobalt, nickel, chromium, molybdenum, antimony, lead, tin].—Metallurgie, Sept.30,1912; pp. 601-638; 75c.

Brislee, F. J.—*Density and Co-Efficient of Linear Expansion of Aluminum.*—Faraday Soc., Trans.; June,1912; pp. 221-229; $2.65.

Childs, D. H.—*Alumina from Clay;* [U. S. Pat. 1,036,454; volatilization of silica from silicates, as silicon tetrafluoride].—E. & M. J., Oct. 19, p. 739; 300 w; 25c.

Chouriguine, M.—*Sur les Alliages du Platine avec l'aluminum;* [The alloys of platinum with aluminum].—Revue de Métallurgie, Nov.,1912, p. 874; 2000 w*; $1.15.

Coates, M. C.—*Overhead Conductors, Copper vs. Aluminum.*—Australian Mng. Standd., Sept.26, p. 306; 800 w; 35c.

Cowles, A. H.—*Alumina, Hydrochloric Acid, Alkalis, and White Hydraulic Cement from Clay, Salt and Lime;* [Read to Internatnl. Congr. of Appl. Chem'y; abstract].—E. & M. J., Sept.21,1912; p. 535; p. 529; 3500 w*; 25c.

Gillett, H. W.—*The Influence of Pouring Temperature Upon Aluminum Alloys.*—8th Internatnl. Congr. of Appl. Chem'y, Proc.; Vol. 2, 1912; pp. 105-112.

Goldberg, G.—*Welche Bestandteile wirken zersetzend auf das Aluminium ein?* [What are the destructive agencies operating on aluminum wares?].—Giesserei Ztg., Sept.1,1912; p. 534; 2400 w; 35c.

Heyn, E.—*Metallography,* 1909-1911.—See Metallopraphy under Metallurgy, etc.

Howard, L. O.—*Alumina and Alunite;* [Possibilities of Utah alunite toward aluminum production].—Salt Lake Mng. Rev., Nov.15, p. 17; 1800 w*; 25c.

Johnson, C. L.—*Aluminum Transmission Lines;* [British practice; abstract from El. World].—Engg. Mag., Sept.,1912; p. 924; 1600 w; 35c.

Phalen, W. C.—*Prospecting for Bauxite or Aluminum Ore.*—M. & S. P., Sept.7,1912; p. 305; 2500 w*; 20c.

Pitavel, R.—*Die elektrochemische Industrie Frankreichs;* [The electrochemical industries of France; German edition].—Halle, 1912; $3.50 (book).

Rebeyrol.—*World's Metal Markets in* 1910; [in French].—See Nickel.

Vogel.—*Cerium-Aluminum.*—See Alloys.

———. *Aluminium;* [History, extraction, preparation, uses].—Mng. Jnl., Sept.7,1912; p. 873; 3000 w; 35c.

———. *Aluminum als elektrisches Leitungsmittel;* [Aluminum as an electric conductor].—Kohle & Erz, Nov.4, p. 1165; 1200 w; 35c.

———. *Aluminum-Kupferlegierung;* [Aluminum-copper alloys].—Giesserei Ztg., June15,1912; p. 388; 600 w; 35c.

———. *Competition in Aluminum Production;* [Proposed plant of Southern Aluminum Co., Whitney, N. Car.].—E. & M. J., June22,1912; p. 1213; 400 w; 25c.

———. *Copper Output for July;* [and 1st 7 months 1911; Copper Producers' Asso. figures].—Mining & Engg. World, Aug.17, 1912; p. 279; 200 w; tables; 10c.

———. *Costs of Producing Sulphuric Acid at Port Wallaroo Smelter, S. Australia.*—E. & M. J., Ang.31,1912; p. 402; 250 w; 25c.

———. *Das Schweissen von Kupfer und Aluminum;* [The welding and rolling of copper and aluminum].—Eisen Ztg., Aug.3, 1912; p. 555; 1600 w; 35c.

———. *Deflection and Stress in Overhead Conductors of Aluminum;* [Chart of British Aluminum Co., Ltd.].—El. Rev. (London), July19,1912; p. 117; 500 w*; 35c.

———. *Great Cobar Copper Mine;* [Describes mine, mill, and smelting].—M. & S. P., Aug.24,1912; p. 234; 800 w; 20c.

———. *Le marché de l'aluminium;* [The aluminum market; recent tendencies].—Jnl. du Four Electriq., Sept.1,1912; p. 361; 1000 w; 35c.

———. *L'industrie de l'aluminium en Italie;* [The aluminum industry of Italy].—Jnl. du Four Electriq., June15,1912; p. 271; 2000 w; 35c.

———. *Progress of Basic Converting.*—E. & M. J., Aug.31,1912; p. 408; 400 w; 25c.

———. *Refining Aluminum by Alloying it with Cerite Metals;* [from Eisen Ztg.].—Castings, July,1912; p. 113; 500 w; 25c.

CHAPTER VII.

Miscellaneous Metals and Ores.

BERYLLIUM

Bleyer, B., and A. Moormann.—*Die Massanalytische Bestimmung des Berylliums;* [Quantitative estimation of beryllium].—Zts. f. analyt. Chemie, 1912, No. 6; pp. 360-367; 65c.

Bleyer, B., and Br. Müller.—*Ueber Beryliumarseniate;* [The beryllium arseniates]. Zts. f. anorgan. Chemie, 1912, No. 3; pp. 285-292; $1.15.

CERIUM

Borchers. — *Metallurgic Progress at Aachen,* 1902-1912; [in German].—See Aluminum.

Kellerman, H.—*Die Ceritmetalle und ihre pyrophoren Legierungen;* [Cerium metal and its pyrophoric alloys].—Halle, 1912; pp. —; 33 figs; $2 (book).

Siebenthal, C. E.—*Zinc and Cadmium in* 1911; *Smelter Production.*—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 54 pp; 10c.

Vogel.—*Cerium-Aluminum.*—See Alloys.

———. *Refining Aluminum by Alloying it with Cerite Metals;* [from Eisen Ztg.].—Castings, July,1912; p. 113; 500 w; 25c.

LITHIUM

Milford, L. R.—*Recent Analyses of the Saratoga Mineral Waters;* and, *Determination of Lithium.*—Jnl. of Ind'l & Engg. Chem'y, Aug.,1912; p. 593; p. 595; 3500 w; 65c.

MERCURY

Allen and Crenshaw.—*Zinc, Cadmium and Mercury Sulphides; Genesis.*—See Zinc.

Hirshberg, L. K.—*A Method for Purifying Mercury.*—Mining & Engg. World, Sept. 21,1912; p. 535; 100 w; 10c.

Jimenez.—*Estadistica minera en* 1909 *y* 1910, *Peru.*—See under Copper.

McCaskey, H. D.—*Quicksilver in* 1911; [Production and Resources; Ariz., Cal., Ida., Nev., Oreg., Tex., Utah, Wash., Alaska; world production; bibliography].—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; pp. 35; 10c.

Osborne, T.—*Quicksilver;* [Occurrences and production; brief notes].—Cheml. Engr., June,1912; p. 247; 600 w; 35c.

Pogatschnigg, V.—*Der Zinnoberbergbau auf dem Christofberge bei Klagenfurt;* [The cinnabar mines near Klagenfurt, Austria].—Montan. Ztg., Sept.1,1912; p. 326; 1000 w; 35c.

———. *Extraction du Mercure en Toscane;* [The recovery of mercury in Tuscany].—Bull. du Commerce, Oct.26,1912; p. 11 (reprinted from Moniteur Tecnico); 1000 w; Nov.2, 550 w; 25c.

———. *Italian Mines.*—Mg. Jnl., Nov. 23,1912; p. 1143; 1200 w; 35c.

———. *Prospecting for Quicksilver;* [Desirability of continuing search for new deposits].—Mng. Sci., July18,1912; p. 33; 750 w; 20c.

———. *Quicksilver in the Urals.*—M. & S. P., July27,1912; p. 117; 500 w; 20c.

OSMIUM AND PALLADIUM

See Platinum Metals.

RADIUM AND RADIO-ACTIVES

See also Uranium.

Berndt, G.—*Determinación de la emanación radioactiva en las fuentes;* [Methods of determining radio-activity of mineral springs].—Soc. Cient. Argentina, Anales, Feb.,1912; pp. 49-92; 75c.

Bragg, W. H.—*Studies in Radio-Activity.* -London, 1912; $1.75 (book).

Demare, F. and C. Jacobs.—*Sur les alliages et les dépots électrolytiques du radium;* [A radioactive silver-radium alloy, and the electrolytic deposition of radium].—Acad. d. Sciences Belg., Bull.; 1912; p. 53-54.

Ebler, E.—*Bestimmung des Radiums in Mineralien und Gesteinen;* [Estimation of radium in minerals and rocks].—Zts. f. Elektrochemie, July1,1912; p. 532; 1800 w*; 45c.

Hahn, O.—*Ueber die Fortschritte der radioaktiven Forschung von ende* 1908 *bis Mai* 1912; [Progress of research work in radio-actives, May, 1908-May, 1912].—Zts. f. Elektrochemie, Sept.1,1912; p. 764; 20,000 w; 45c.

Hauptick, E. de.—*Search for Radium in Russia.*—Mg. Jnl. (London), Nov.30,1912; p. 1172; 750 w; 35c.

Kreuznacher Solbäder A-G.—*Die Kreuznacher Solquellen und ihre Verwertung zur Gewinnung von Kochsalze, Mutterlauge und Radiumsalzen;* [The Kreuznach brine springs as a source of table salt, potash liquors and radium salts].—Kreuznach, 1912; 7 pp; 75c.

Krusch, P.—*Radiumgehalt der Pechblenden;* [The radium content of pitchblendes].—Zts. f. prakt. Geol., May,1912; p. 208; 500 w; 75c.

Meyer, S., and V. F. Hess.—*Zur Definition der Wiener Radiumstandardpräparate;* [Definition of the Vienna standard radium preparation].—Inst. f. Radiumforschung, Mittlngn.; No. 17; 1912; 29 pp.*; 75c.

Obalski, J.—*Rare-Earth and Radium-Containing Minerals in Quebec.*—Canadian Mng. Jnl., July1,1912; p. 449; 1000 w; 25c.

Schwerdtner, —. *Radium;* [Radium, its occurrences and extraction from Bohemian and Saxony minerals; read to Physikalischer Ver. zu Frankfurt, May11,1912; brief abstract].—Chemiker Ztg., June8,1912; p. 649; 600 w; 35c.

Wolff, G.—*Das Radium in der Biologie und Medizin;* [Radium in biology and medicine].—Deu. Bergwerks Ztg., Sept.21, p. 1; Sept.24, p. 1; Sept.25, p. 1; 4500 w; 50c.

———. *Radium;* [Occurrences in Europe, preparation, possibilities in uses].—Mng. World (London), Aug.3,1912; p. 139; 1000 w; 35c.

———. *Radiumton;* [Radium clay].—Ton-industrie-Ztg., Nov.14,1912; p. 1796; 800 w; 35c.

SELENIUM AND TELLURIUM

Dudley, W. L. and E. V. Jones.—*A Spectrographic Study of Tellurium.*—Amer. Cheml. Soc., Jnl.; Aug.,1912; pp. 995-1003*; 65c.

Fenaroli, P.—*Das Selen als Färbemittel für Natrium-Kalk-Silicatgläser;* [Selenium as colorant for soda-lime-silicate glassware].—Chemiker Ztg., Oct.3,1912; p. 1149; 2400 w; 35c.

Hess.—*U. S. Production,* 1911. See Antimony.

Krase, F.—*Selenium Glass;* [From "Sprechsaal," Vol. 45, pp. 214-216; 227-228].—Jnl. of Indl. & Engg. Chem'y, July,1912; p. 539; 3000 w; 65c.

STRONTIUM

Fischer and Ploetze.—*Strontium Peroxide in Electric Pressure Furnace.*—See under Electrometallurgy.

Plötze, H.—*Oxydationsreaktionen im elektrischen Druckofen mit den Oxyden des Strontiums und Bleies und den Hydroxyden der Alkalien;* [Oxidation reactions in the electric pressure furnace with strontium and lead oxides and the alkaline hydroxides].—Berlin dissert.; 1912; 67 pp.; $1 (Thesis).

TANTALUM AND NIOBIUM

Brunck, O.—*Tantalelektroden;* [Tantalum electrodes as a substitute for platinum].—Chemiker Ztg., Oct.19, p. 1233; 1200 w; 35c.

Gewecke, J.—*Ueber die Thallisalze der Halogensauerstoffsäuren;* [Thallium salts of the halogen acids].—Zts. f. anorgan. Chemie, 1912, No. 3; pp. 272-276; $1.15.

Hess, —. *Tantalum in* 1911.—See Tungsten.

von Pirani, M.—*Das Tantalmetall und seine Verwertung;* [Metallic tantalum and its uses in the industries and sciences; read to Deu. Naturforscher, Münster, Sept.,1912; brief abstract].—Chemiker Ztg., Sept.24, 1912; p. 1096; 300 w; 35c.

THORIUM AND RARE EARTHS

See also Cerium.

Baskerville, C.—*New Process for the Extraction of Thoria;* [Read to Internatnl. Congr. of Appl. Chem'y; abstract].—Met. & Cheml. Engg., Sept.12,1912; p. 634; 200 w; 35c.

Borchers.—*Metallurgic Progress, Aachen,* 1902-1912; [in German].—See Aluminum.

Dahms.—*Ores in Acidic Rocks, German S. W. Africa;* [in German]. See under Tin.

Hahn, Dr.—*Thoric Dioxide in S. African Monazites;* [Read to Cape Cheml. Soc., abstract].—S. Afr. Mng. Jnl., Sept.14, p. 41; 700 w; 35c.

Harrington, C. L.—*Mineral Resources of South America.*—See under Copper.

James, C., and T. O. Smith.—*The Quantitative Separation of Lanthanum from Yttrium.*—Amer. Cheml. Soc., Jnl.; Sept., 1912; 3 pp.; 65c.

Koss, M.—*Ein neues Reagen auf Thorium;* [New test for thorium accompanied by cerium and yttrium earths].—Chemiker Ztg., June18,1912; p. 686; 750 w; 35c.

Meyer, R. J., and O. Hauser.—*Die Analyse der seltenen Erden und der Erdsäuren;* [Manual of chemical analysis of the rare earths and earthy acids; cerium, yttrium, zircon and thorium earths; titanium, niobium and tantalum acids].—Stuttgart, 1912; 320 pp.; 45 figs.; $3.75 (book).

Metzger, F. J., and F. W. Zons.—*A Volumetric Method for the Determination of Thorium in the Presence of Other Rare Earths; The Analysis of Monazite Sand.*—Jnl. of Ind'l & Engg. Chem'y, July,1912; p. 493; 1800 w; 65c.

Obalski, J.—*Rare-Earth and Radium-Containing Minerals in Quebec.*—Canadian Mng. Jnl., July1,1912; p. 449; 1000 w; 25c.

Rosenheim, A.—*Die quantitätive Bestimmung des Thoriums durch Natriumsubphosphat besonders im Monazitsande;* [Quantitative estimation of thorium with sodium subphosphate, especially in monazite sands].—Chemiker Ztg., July18,1912; p. 821; 1200 w; 35c.

Weiss, L., and W. Trautmann.—*Zur Analyse von Ferrozirkon;* [Analysis of ferrozirconium; reply to criticism of Wunder and Saenneret].—Zts. f. analyt. Chemie, 1912, No. 5; p. 303; 800 w; 65c.

Wirt, —. *Die Reindarstellung der Thorerde aus dem Monazitsand mit Hilfe der Unterphosphorsäure;* [The use of the subphosphoric acids in producing the thorium elements in their pure state from monazite sands].—Zts. f. angew. Chemie, Aug.16, 1912; 2 pp.; 45c.

———. *Monazite in Southern India.*—Mng. Jnl., Aug.10,1912; p. 802; p. 808; 1000 w; 35c.

ZIRCON

Watson, Thos. A. and Frank L. Hess.—*Properties, Occurrence and Uses of Zircon;* [Bulletin of the Univ. of Virginia; abstract].—Mg. & Eng. World, Nov.23,1912; p. 951; 4500 w; 10c.

MISCELLANEOUS (Unclassified)

Adams, G. F.—*Mining in India;* [Abstract of official report for 1911; coal, manganese, rubies, gold, mica; accidents].—Mng. World (London), Sept.14,1912; p. 318; 800 w; 35c.

Anderson, Amil A.—*Forms and Occurrence of Lithium;* [Abstracted from Pahasapa Quarterly].—M. & M., Dec.,1912; p. 283; 2000 w; 35c.

Deichman, C. F.—*Mining Progress in Japan;* [Chiefly on gold, copper, sulphur, zinc, and coal; also table of production, 1911].—U. S. Consul, Rep., Oct.14, p. 244, 800 w; 20c.

Devlin, C. R.—*The Provincial Mines Branch and the Mineral Resources of Quebec;* [with tables of production].—Canadian Mng. Jnl., July1,1912; p. 429-430; 1500 w; 25c.

Grossmann, M.—*Zur Kenntnis der gegenwärtigen Lage der Berg und Hüttenindustrie in Russland;* [Present status of mining and metallurgic industries in Russia; chiefly on coal and oil; also gold, iron, copper, platinum].—Berg & Hüttenm. Rundschau, July 20,1912; p. 223; 1000 w; 35c.

Guillemain, C.—*Lagerstätten nutzbarer Mineralien in Uruguay;* [Map of the mineral deposits of Uruguay; silver-lead; manganese-iron; gold, copper; coal].—Bergwirtsch. Mittlngn., May,1912; p. 87; 150 w*; 75c.

Günthersberger, J.—*Aus der frühesten Geschichte des Bergbaus in Böhmen;* [The earliest history of mining in Bohemia up to 1854; with directory of ancient mines; chiefly silver, also iron, gold, lead, cobalt, graphite, pyrite, copper, coal, tin, etc.].—Zentral. Verbd. Bergbau Betriebsl. Oestr., Zts.; Sept.15,1912; p. 533-573*; 50c.

Hill, J. M., and W. Lindgren.—*The Mining Districts of the Western U. S.*, by Jas. M. Hill; *With a Geologic Introduction*, by W. Lindgren; [Directory of mining districts in Ariz., Cal., Colo., Ida., Mont., Nev., N. Mex., Oreg., S. Dak., Tex., Utah., Wash., Wyom., with location of each, outline of geology, and references to literature].—U. S. Geol. Survey, Bull. 507; 1912; 309 pp*; 20c.

Hofman, H. O. and W. Wanjukow.—*The Decomposition of Metallic Sulphates at Elevated Temperatures in a Current of Dry Air;* [Tests on ferrous, bismuth, aluminum, lead, cupric, manganous, zinc, nickel, cobalt, cadmium, magnesium, silver, calcium, and barium sulphates].—Amer. Inst. Mng. Engrs. Bull. No. 69; Sept.,1912; pp. 889-945*; $1.15.

Manning, I. A.—*Metals and Minerals of Colombia;* [Copper, also gold, iron, oil, coal, asphalt, garnet].—U. S. Consul. Rep., Oct.31, p. 561; 1800 w; 20c.

Neumann, B.—*Das Metallhüttenwesen im Jahre* 1911; [Review of metallurgy in 1911; 1: Copper; 2: zinc, cadmium, tin, lead; 3: antimony, arsenic, bismuth, nickel, cobalt, platinum, mercury, silver, gold, aluminum].—Glückauf, Sept.2,1912; pp. 1529-1536; (2) Sept.28, pp. 1569-1579; (3) Oct.6, pp. 1613-1623; 95c.

Of, Chas.—*The Mineral Industry; Its Statistics, Technology and Trade During* 1911.—"Mineral Industry," Vol. 20; 1912; 997 pp*; $10, net (book).

Olszewski, S.—*Karte der bergmännischen Industrie Galiziens;* [Mining map of Galicia; with text in Polish and a briefer text edition in German].—Vienna, 1912; $10 (map alone, $3.50).

Pálfy, M. von.—*Geologische Verhältnisse und Erzgänge der Bergbaue des siebenburgischen Erzgebirges;* [Geological relations and lodes of the mines in the Transylvanian Erzgebirge; transl. from the Hungarian of the Ungar. Geol. Ges., 1911].—Budapest, 1912; 297 pp.; $7 (book).

Rhodesia Chamber of Mines (Inc.).—*Output of Gold and Other Metals, and of Coal;* [Monthly reports of 5 tables each, including also silver, lead, chrome-iron, tungsten, antimony, asbestos, diamonds].—Bulawayo; 50 cts. each.

Rohrer, L.—*Die Bergwerke in Makedonien und Chalkidike;* [Mining in Macedonia (arsenic, lead, antimony, chromium, iron, copper, manganese, coal, gold) and the Chalcidician peninsula (gold, silver, iron, lead)].—Montan. Ztg., Sept.15,1912; p. 344; 2100 w; 35c.

Simmersbach, B.—*Geschichte zur Entwickelung der bergbaulichen und industriellen Industrie in der Mark Brandenburg;* [History of development of the mining industries in Mark Brandenburg up to 1800; peat, coal, gypsum, iron and steel, copper, brass, gold, silver].—Deu. Bergwerke Ztg., July21, p. 1; July24, p. 1; July25, p. 1; 6000 w; 50c.

Bureau de Statistique de l'Agriculture, Mines & Forests.—*Berghau in der Turkei;* [Abstract of official reports on mineral production in Turkey in years 1323 and 1324 (March,1907-1908, and 1909-1910)].—Bergwirtsch. Mittlngn., May,1912; p. 95; 1000 w; 75c.

———. *Berg- und Hüttenwesen in Bosnia und der Herzegowina, sowie Oesterreich,* 1911; [Review of the mining and metallurgic industries of Bosnia and Herzegowina in 1911; and official statistics of mineral production, imports and exports in Austria, 1910 and 1911].—Montan. Ztg., Oct.1, pp. 368-372; 35c.

———. *Bergbau in Italien;* [Statistics of Italian mineral production in 1910].—Montan. Ztg., Sept.15,1912; p. 346; 2000 w; 35c. Also in Spanish in Rev. Minera, Sept.8, pp. 423-424; 35c.

———. *Bergwerks-, Hütten-, und Salinenbetrieb in Bayern im Jahre* 1911; [Statistics of mining, metallurgy and salt works in Bavaria, 1911; salt, lignite, iron ore, iron and steel].—Berg- & Hüttenm. Rundschau, Aug.20, p. 254; 2000 w; 35c.

———. *Berg- und Hüttenwesen, Bosnien-Herzegowina,* 1911; [Mineral output and mining industry of Bosnia and Herzegowina, 1911; reviews official report; chiefly lignite, iron, pyrite, manganese; also chromium, salt brines].—Montanist. Rundschau, July1,1912; p. 633; 1200 w; tables; 45c.

———. *Der Bergbau in Serbien;* [Review of mining in Servia and 1911 production; gold, silver, copper, lead, antimony, pyrite, millstones, cement].—Berg- & Hüttenm. Rundschau, Oct.5, p. 6; 1000 w; 35c.

———. *Die Berg- und Hüttenwerksproduktion Oesterreichs im Jahre* 1911; [Statistics of mine and works production in Austria in 1911; coal, lignite, iron and steel, lead, copper, zinc, tin, manganese, bismuth, antimony, uranium, graphite, mercury, gold, silver].—Montanist. Rundschau, Oct.16, pp. 1097-1108; 45c.

———. *Die Eisen- und Metallhüttenindustrie Frankreichs im Jahre* 1910; [Siderurgy and metallurgic industries of France, 1910; official statistics; gold, platinum, silver, lead, zinc, copper, nickel, aluminum, antimony, manganese].—Glückauf, July13, 1912; p. 1129-1132; tables; 50c.

———. *Die französische Bergwerksindustrie im Jahre* 1910; [Statistics of mine production, labor, etc., in the French mining industry, 1910].—Glückauf, July20,1912; pp. 1170-1176; 45c.

———. *Entwickelung der oestr. Berg- und Hüttenwerksproduktion* 1880-1910; [Statistics of mines and metal output and development in Austria, 1880-1910; coal, lignite, coke, iron, lead, silver, mercury, zinc, graphite, copper, gold, salines].—Montan. Ztg., July15,1912; p. 262; Aug. 1, p. —; 6000 w; tables; 50c.

———. *Gewinnung der Bergwerke, Hütten und Salinen in Bayern* 1911; [Statistics of mine and works production in Bavaria in 1911].—Glückauf, Oct.12, p. 1689; tables; 45c.

———. *L'industria minerale Italiana nel* 1911; [Statistics of mineral production in Italy, 1911].—Rassegna Mineraria, Sept.21, 1912; p. 155-157; tables; 35c.

———. *Metallic Minerals of Brazil;* [Gold, bismuth, mercury, platinum, lead, iron, copper].—M. & S. P., Oct. 26, p. 528; 600 w; 20c.

———. *Minerals from the Falkland Islands;* [Bitumen, oil, iron and copper ores].—Imperial Inst., Bull.; Vol. 10, No. 3; Oct., 1912; p. 400-404; 65c.

———. *Mining Industry of S. Africa;* [Official statistics for 1911; coal, coke, copper, tin, asbestos, graphite, manganese, magnesite, zinc, lead].—Iron & Coal Trades Rev., Oct.11, p. 587; 200 w; tables; 35c.

———. *Mining in Prussia in* 1911; [Official report, summary; coal, salt, potash, iron, zinc, lead, copper, gold-silver, nickel, mercury, manganese, arsenic, tin, sulphur, pyrite, antimony].—Mng. Jnl., Aug.24,1912; p. 830; 2100 w; 35c.

———. *Production der Bergwerke, etc.,* 1911; *Preussen und Oesterreich;* [Statistics of mine and works production in Austria and Prussia in 1911].—Glückauf, Nov.9, pp. 1843-1849; tables; 50c.

———. *Production der Bergwerke, Salinen und Hütten,* 1911; [Statistics of production of the mines, salines and smelters of Prussia in 1911; coal, lignite, graphite, asphalt, petroleum, salt, potash, Epsom salts, borax, iron, zinc, lead, copper, silver, gold, tin, mercury, cobalt, antimony, arsenic, manganese, bismuth, uranium, tungsten, pyrite, alum, cadmium, selenium, vitriols].—Zts. f. Berg-, H.-, & Salinenw., Vol. 60, Statistical No. 1; pp. 1-28; $1.15.

———. *Rhodesia; A Review of Mining and Metallurgy in Southern Rhodesia;* [Gold chiefly; also coal, copper, chrome iron, asbestos, diamonds, tin, silver, lead, tungsten].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 291; 13,000 w*; $1.

———. *Statistique de l'industrie minérale Allemagne-Luxemburg,* 1910; [Statistics of mineral and metal production in Germany and Luxemburg, 1910].—Annales d. Mines, Paris; Sept.,1912; p. 280; tables; 65c.

———. *Statistisches;* [Statistics of production, Upper Silesia, 1st semester 1912; coal, coke, iron ore, iron and steel, zinc, lead].—Oberschles. Berg- & Hüttenm. Ver., Zts.; Aug.,1912; p. 357-362; tables; 45c.

———. *The Mineral Industry of the U. K.;* [Review of production in 1911].—Mng. Jnl., June15,1912; p. 583; 2000 w; 35c.

———. *U. S. Census Report on Mines and Quarries;* [Statistics of operators, mines, output, expenditures, personnel, by materials and states].—Mining & Engg. World, Sept.14,1912; p. 479; 2000 w; tables; 10c.

———. *Welt Produktion und Verbrauch von Blei, Kupfer, Zink und Zinn;* [Statistics of world's production of copper, lead, zinc and tin; also silver, nickel, aluminum, mercury, 1909-10-11; from Metal Ges. figures for 1911].—Glückauf, Aug. 3, 1912; pp. 1253-1262; 50c.

———. *West Country Mineral Statistics;* [Cornwall and Devon; output by companies, 1911; complete statistics for 1910 on arsenic, arsenical pyrite, copper, iron, ochre, tin, uranium, tungsten; barytes, china clay; clays, lime and stone].—London & W. Country Chamber of Mines, Records, July,1912; pp. 4-8; 75c.

NON-METALS.

CHAPTER VIII.

Fuels and By-Products.

COAL.

Coal Fields and Mining.

von der Aa, —. *Steinkohle, Braunkohle, Eisenerz und Eisenindustrie;* [Teubner's Monographs of Commercial Geography of Germany; Vol. II: The hard-coal, lignite, iron-ore and siderurgic industries].—Leipzig and Berlin, 1912; Map and explanatory text; $2.

Abele, C. A.—*Statistics of the Mineral Production of Alabama for* 1910.—Ala. Geol. Survey, Bull. 12; 1912; 51 pp.

Adams, G. F.—*Coal Mining in India in* 1911; [Abstract of official report].—Coll'y Guardn., Oct.11, p. 742; Oct.18, p. 787; Oct. 25, p. —; 8000 w; 65c.

Adams, G. F.—*Conservation and Future Trend of Coal Mining in India.* See India.

Adams, G. F.—*Notes on Coal Mining in India;* [Extracts from report of Chief Inspector of Mines for 1910; production, conditions, accident rate, etc.].—Coal Age, June 22.1912; p. 1212; 3000 w; 20c.

Aguillon, L.—*Recueil des textes officiels relatifs à l'exploitation des mines de combustibles;* [Collection of French regulations governing coal mining].—Paris, 1912; 330 pp.; $2.00; (book).

Anderson, G. E.—*Production of Coal: Statistics for* 1910; [China and Indo-China]. U. S. Consul. Rep., Aug.2,1912; p. 583; 500 w; 20c.

Arthur, R.—*Mineral Resources of the Philippine Ids.*—Mining & Engg. World, July20,1912; p. 107; 2000 w*; 10c.

Atkinson, A. A. and others.—*Coal Mining in N. S. W.*—[Abstract of official report for 1911].—Coll'y Guardn., Aug.30,1912; p. 429; 1000 w; 35c.

Bain, H. F.—*Alaska Coal Land Problems;* [With discussion by R. W. Raymond and W. H. Hampton].—Amer. Inst. Mng. Engrs., Bull. 68, Aug.1912; pp. 811-843; $1.15.

Baines, J. J.—*A New English Coal Field;* [Southeast England].—Mines & Minerals, Sept.,1912; p. 72; 1000 w; 35c.

Ball, L. C.—*The Mammoth Colliery;* [Geology].—Queensl. Govt. Mng. Jnl., June, 1912; p. 261; 600 w; 35c.

Barrois, Ch.—*Les variations de composition du charbon dans certaines veines d'Aniche;* [Variations in coal composition in certain seams in the Aniche district, N. France].—Soc. Geol. du Nord. Annales, Vol. 40, 1911; pp. 177-186.

Barrow, G., and others.—*Geological Survey of the Midland Coal Field;* [from report of Geol. Surv. of Gt. Britain f. 1911].—Iron & Coal Trades Rev., July12,1912; p. 57; 3000 w; 35c.

Bartonec, Fr.—*Ueber die weitere Umgebung des mährisch-schlesisch-polnischen Kohlenbeckens;* [Stratigraphy, geology and distribution of coal seams in the Moravia-Silesia-Poland coal basin].—Oestr. Zts. f. Berg- & H-wesen, Apr.6,1912; pp. 185-190; Apr.13, pp. 203-205; Apr.20, pp. 221-222*; 95c.

Baum, Bergassessor.—*Die Bergwerksanlage Admiral bei Hörde;* [The Admiral mining plant at Hörde].—Glückauf, Nov. 30,1910; p. 1951; 5000 w*; 50c.

Beard, J. T.—*Some Points of Interest in Mine Ventilation.* (Paper read before West Virginia Coal Mining Institute).—Mg. Sci., Dec.5,1912; p. 358; 2500 w; 20c.

Beekly, A. L.—*The Culbertson Lignite Field, Valley County, Mont.*—U. S. Geol. Survey, Bull. 471-D; 1912; pp. 137-176*; 10c.

Bell, W. A.—*Joggins Carboniferous Section, Nova Scotia.*—Canada Geol. Survey, Rep. f. 1911; 1912; pp. 328-334.

Bement, A.—*The Appalachian Coal Field and its Fuel Products.*—Black Diamond, Oct.5,1912; p. 26; 2400 w*; 30c.

Bement, A.—*Styles in Coal; How They Hit the Wilmington Field, Illinois.*—Black Diamond, Oct.12, p. 20, p. 32; 2500 w*; 30c.

Bement, A.—*The Franklin County, Illinois, Coal Field.*—Black Diamond, Aug.31, 1912; p. 20; 2400 w*; 30c.

Berger, L.—*Chinas Bergbau, speziell seine Kohlen- und Eisen-industrie;* [China's mining, especially its coal and iron industry].—Technische Blätter, Nov.30,1912; p. 377; 2400 w*; 35c.

Blom, D. van.—*Staatsmijnen en particulieren;* [State-owned vs. private-owned mines, with special reference to Holland coal mines].—Economist, No. 6, 1912; pp. 441-450.

Böker, H. E.—*Die Besteuerung des Steinkohlenbergbaues in Elsass-Lothringen;* [The taxation of coal mining in Alsace-Lorraine]. — Glückauf, Nov.23,1912; p. 1917; 8000 w*; 50c.

Bolesta-Malewski, —. *Abbau mit hohem Stoss unter Verwendung von Abbauförder-einrichtungen;* [Machine mining of thin coal seams using face-conveyors; Ruhr district, Germany].—Glückauf, Oct.26, p. 1749-1758*; Nov.2, pp. —*; 12,000 w*; 75c.

Bordeaux. — *Vladivostok District.* — See Zinc.

Bowen, C. F.—*The Baker Lignite Field, Custer County, Mont.*—U. S. Geol. Survey, Bull. 471-D; pp. 20-44*; 20c.

Bragge, Geo. S.—*The Coal and Iron Industries of Derbyshire and Nottinghamshire;* [Read to Surveyors' Instn.; abstract].—Iron & Coal Trades Rep., July19, 1912; p. 94; 1800 w*; 35c.

Brooks, A. H.—*Alaska Mining Industry in* 1911.—U. S. Geol. Survey, Bull. 502-A; 1912; 90 pp.; 20c.

Bulman, H. F. and R. A. S. Redmayne.—*Colliery Working and Management.*—London, 1912 (3d. edition); 300 pp.*; $2 (book).

Bureau. E.—*Bassin houiller de la Basse*

Loire; [The Lower Loire Coalfield, Part 1]. —Paris,1912; 447 pp.*; $3 (book).

Busch, —. *Der Kohlenaussenhandel Oesterreich-Ungarns;* [The foreign coal trade of Austria-Hungary in 1911].—Oestr. Zts. f. Berg- & H-wesen, Oct.12, p. 581-585*; 50c.

Cairnes, D. D.—*The Ore and Coal-Bearing Formations of the Yukon;* [Read to Canadian Mng. Inst., Toronto, March,1912; abstract on coal resources and geology].—Canadian Mng. Jnl., June15,1912; p. 407; 1200 w; 25c.

Calvert, W. R.—*Geology of Certain Lignite Fields in Eastern Montana.*—U. S. Geol. Survey, Bull. 471-D; 1912; pp. 5-20*; 10c.

Cameron, J. S.—*Machine Mining in Oklahoma.*—Coal Trade Bull., Oct.15, p. 29; 1800 w*; 25c.

Cameron, W. E.—(1) *Coal on the North Ipswich Coal & Coke Co.'s Property;* (2) *Coal near Dalby.*—Queensland Geol. Survey, Publ. No. 235; (1), pp. 3-6; (2), pp. 7-13.

Cameron, W. E.—*Ipswich Coalfield;* [Boring for Aberdare seam near Bundamba, Queensl.].—Q. Govt. Mng. Jnl., July, 1912; p. 317; 1000 w; 35c.

Cameron, W. E.—*Eden Park Estate, near Goodna; Proposed Boring for Coal.*—Queensl. Govt. Mng. Jnl., July,1912; p. 321; 1200 w*; 35c.

Cameron, W. E.—*Coal at Dalby, Queensland.*—Queensl. Govt. Mng. Jnl., May,1912; p. 210; 1000 w; 35c.

Capps, S. R.—*Gold Placers of the Yentna District, Alaska;* [and Coal].—U. S. Geol. Survey, Bull. 520-F; 1912; 31 pp*; 10c.

Childs, J. N.—*Selecting Pumps to Unwater Anthracite Mines.*—Bl. Diam., Dec. 7,1912; p. 16; 1500 w*; 30c.

Clapp, C. K.—*Geology of Nanaimo Sheet, Nanaimo Coal Field;* also *Geology of the Comox and Suquash Coal Field, Vancouver I'd., B. C.*—Canada Geol. Surv., Rep. f. 1911, pp. 91-107*.

Clapp, C. H.—*Southern Vancouver Island.* —Canada Dept. Mines, Geol. Survey Memoir No. 13; 1912; 208 pp*; 50c.

Clemens, E.—*Remedies for Electrical Troubles.*—Coal Age, Dec.7,1912; p. 793; 3000 w*; 20c.

Cornet, F. C.—*Coal at Panama.*—Coal Age, Oct.5,1912; p. 460; 500 w; 20c.

Coulson, R. H.—*The Coal Trade of Leipzig.*—Coal Age, Aug.31,1912; p. 299; 500 w; 20c.

Cox, A. J.—*Chemical and Physical Character of Philippine Coal.*—Philip. Jnl. of Sci., Feb.,1912; pp. 1-19; 65c.

Craig, E. H. C.—*The Coalfields of Alberta.*—Mng. Jnl., June29,1912; p. 649; 2500 w; 35c.

Crook, T.—*Sulla frequente presenza dell' ankerite nel carbon fossile;* [The frequent occurrence of ankerite in coal; from Mineralogical Mag., 1912].—Rassegna Mineraria, July11,1912; p. 21; 1300 w; 35c.

Cunningham, F. W.—*Pillar Drawing.*— Coal Mng. Inst. of Amer., Proc. for 1911; 1912; pp. 35-62*.

Davies, Jos. and G. Wallis.—*North Country Coal and Shipping Annual for* 1912.— London, Newcastle & Cardiff; 1912; $2.50 (book).

Davis, J. A.—*The Little Powder River Coal Field, Campbell County, Wyom.*—U. S. Geol. Survey, Bull. 471-F; 1912; pp. 3-20*; 10c.

Dawkins, W. B.—*The Southeastern Coal Field, the Associated Rocks and the Buried Plauteau;* [Read to Manchester Geol. & Mng. Soc.].—Coll'y Guardn., Nov.8, p. 940; 2400 w; 35c. Also in Iron & Coal Trades Rev., Nov.8, p. 741; 5000 w*; 35c.

Dawkins, W. B.—*The Further Evidence of Borings as to the Range of the Southeastern Coalfield and of the Paleozoic Floor, and as to the Thickness of the Overlying Strata;* [Read to Geol. Soc. of London, June13,1912; abstract].—Iron & Coal Trades Rev., June21, p. 997; 1000 w; 35c. Also in Mng. Mag., July, p. 68; 500 w*; 45c.

Dean, Samuel.—*The Coal Dust Question.*—M. M., Dec.,1912; p. 245; 3000 w*; 35c.

Delgado, L. A.—*The Coalfields of Oyon, Peru.*—Peru To-Day, Sept.,1912; p. 314; 1000 w*; 25c.

Di Villa, Edw.—*The Coal Supply of Manchuria.*—M. & S. P., July13,1912; p. 53; 1000 w*; 20c.

Dilworth, J. B.—*Die Kohlenfelder der Philippinen;* [Coal fields of the Philippines; translated from Amer. Inst. Mng. Engrs., Bull.].—Berg- & Hüttenm. Rundschau, Aug. 20,1912; p. 249; 4000 w; 35c.

Dobbins, J. L.—*Coal Mining in Northern China;* [Northern Shansi coals and mining practice].—Mines & Minerals, Aug.,1912; p. 59; 3000 w*; 35c.

Donath, Ed.—*Zur Kenntnis der fossilen Kohlen;* [The arsa coal of Istria, and notes on the characters of some Cretaceous and early Tertiary German-Austrian coals]. —Chemiker Ztg., Oct.19, p. 1234; 600 w; 35c.

Donath, Ed.—*Zur chemischen Charakteristik der Braunkohlen;* [Chemical characteristics of the lignites].—Oestr. Zts. f. Berg- & H-wesen, May25,1912; p. 281; 4000 w; 45c.

Donath, Ed. and A. Indra.—*Ueber die Arsakohle von Carpano in Istrien;* [The sub-bituminous or "arsa" coal of Carpano, Istria, Austria].—Chemiker Ztg., Sept.26, 1912; p. 1118; 4000 w; 35c.

Dowling, D. B.—*Coal Occurrences and Progress of Development Work in Alberta and Saskatchewan;* [Including special report on Roche Miette area, Jasper Park, Alta.].—Canada Geol. Survey, Rep. f. 1911; pp. 201-225*.

Dowling, D. B.—*Coal Stripping in Alberta;* [Steam-shovel bench mining of Edmonton seam, Tofield].—Canadian Mng. Jnl., Aug.15,1912; p. 543; 400 w*; 25c.

Dunstan, B.—*Bowen River Coal Deposits.*—Queensl. Mng. Jnl., Oct.,1912; p. 485; 1000 w; 35c.

Dunstan, B.—*Stanwell Coal Measures.*— Queensl. Govt. Mng. Jnl., June,1912; p. 260; 400 w*; 35c.

Edwards, W. H.—*The Terra del Fuego Coal Field.*—Coal Age, Aug.17,1912; p. 222; 2100 w.; 20c.

Easton, N. D.—*The Cannel Coal Fields of Kentucky.*—Coal Age, Oct.5,1912; p. 454; 1800 w*; 20c.

Ellis, R. W.—*Mining Prospects of Argentina.*—Mining & Engg. World, July27,1912; p. 148; 800 w; 10c.

English, H. K.—*New Arrangement in Mine Hoisting.*—Coal Age, Dec.7,1912; p. 791; 1500 w*; 20c.

Evans, G. W.—*The Coal Fields of King County.*—Washington Geol. Survey, Bull. 3; 1912; 247 pp*; 85c.

Fauck, A.—*Die Nachweisung von Steinkohlen Vorkommen in Bohrlöchern;* [The determination of coal seams in drill holes.] —Organ d. Bohrtechniker, June15,1912; p. 137; 600 w; 35c.

Féry, Ch.—*Bombe calorimétrique thermo-electrique;* [The new Féry thermo-electric bomb for rapid determination of calorific power of fuels].—Rev. Pratiq. d. Ind's Metallgiq., June,1912; p. 7; 500 w*; 65c.

Fleck, A.—*Die Lagerungsverhältnisse im nordwestböhmischen Braunkohlenbecken zwischen Brüx und Dux;* [Stratigraphy of the northwest Bohemia coal field between Brüx and Dux].—Glückauf, Oct.12, pp. 1661-1668*; 45c.

Fohs, F. J.—*Coals of the Region Drained by the Quicksand Creeks in Breathitt, Floyd and Knott Counties.*—Kentucky Geol. Surv., Bull. No. 25 (18); 1912; 79 pp*; 50c.

Fontaine, M.—*Rapport de Mission sur les mines de la Soc. Houillère de Chalonnes;* [Report on inspection of the Chalonnes collieries, Maine-et-Loire, France]. — Paris, 1912; 32 pp.; 75c.

Freise, —. *Einige Braunkohlenvorkommen an der Küste des brasilianischen Staates Bahia;* [Some lignite deposits along the Bahia coast, Brazil, and the possibilities of working].—Braunkohle, July5,1912; pp. 210-213; 45c.

Friedensburg, F. — *Die subsudetische Braunkohlenformation in Flussegbiet des Mittellaufes der Glatzer Neisse;* [The subsudetic formation of lignite in the Glatze-Neisse river basin].—Breslau dissertation; 1912; 60 pp. $1.

Fullerton, A.—*A Coal Mountain in the West;* [Anthracite 50 miles sw. of Calgary, Alberta].—Coal Age, Aug.31,1912; p. 282; 500 w*; 20c.

Gaebler, C.—*Das oberschlesische Steinkohlenbecken;* [The Upper Silesian coal basin; chiefly geologic].—Kattowitz, 1911; pp. —; 10 plates; $7 (book).

Gardner, J. H.—*Preliminary Report on the Economic Geology of the Hartford Quadrangle, Ky.;* [Chiefly coal and undeveloped iron].—Kent'y Geol. Survey, Bull. No. 20; 1912; pp. 1-25.

Gascoyne, R.—*The Coalfields of South Africa;* [Geology, mines and production in each state].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; pp. 363-382; 20,000 w*; $1.

Glöckner, F. — *Das Volumenverhältnis zwischen Moortorf und daraus resultierender autochthoner Humusbraunkohle;* [Volume relations between peat and the humus-lignites resulting autochthonously therefrom].—Zts. f. prakt. Geol., Sept.,1912; pp. 371-374; 75c.

Gray, F. W.—*The Dominian Coal Co., Ltd.*—Canadian Mng. Jnl., Sept.15,1912; p. 609; 3500 w*; 25c.

Glöckner, —. *Inkohlung und Kaolinisierung;* [Coalizing of carbonaceous deposits and effects upon overlying strata].—Braunkohle, June12,1912; pp. 225-226; 45c.

Goodale, S. L.—*Modern Methods in Coal Mining;* [Safety provisions in H. C. Frick Coke Co. mines, Penna.].—Coal Trade Bull., Aug.1,1912; p. 29; 3300 w; 25c.

Griffith, Wm. and Conner, E. T.—*Eight Sources of Genuine Anthracite Coal Supply in the U. S.;* [Read to 8th Internatnl. Congr. of Appl. Chem'y; abstract].—Black Diamond, Oct.26, p. 15; 2500 w*; 25c.

Griffith, Wm. and E. T. Conner.—*The Probable Life of the Anthracite Coal Field;* [Read to Internatnl. Congr. of Appl. Chem'y].—Black Diamond, Nov.2, p. 17, p. 21; 1000 w*; 30c.

Griffiths, David.—*Needed Education in Coal Mining.*—Coal Age, Nov.30,1912; p. 753; 2500 w; 20c.

Griffith, Wm.—*Beginning of Anthracite Coal Trade.*—Coal Age, July13,1912; p. 40; 1600 w*; 20c.

Griffith, Wm., and Eli T. Conner.—*Difficulties Overcome in Mining Anthracite Coal.* —Bl. Diam., Nov.9,1912; p. 20; 2000 w*; 15c.

Grimshaw, Robert. — *Kohlengewinnung mittels elektrisher Stossmachinen;* [Coal mining by means of electrical puncher machines] (part 2).—Technischer Centralanzeiger (Kohle u. Erz); Nov.11,1912, 2000 w; Nov.18,1912; p. 1207; 1300 w*; 50c.

Griswold, C. T.—*Lignite Mining in Colorado;* [Denver basin and Colorado Springs field].—Coal Mng. Inst. of Amer., Proc. for 1911; 1912; pp. 321-330.

van Groenendael, H.—*Les nouveaux bassins de charbon gras sur la Meuse, dans le Limburg Hollandais;* [Nationalization of the coal basin near Sittard, Meuse river, Holland Limburg].—Rev. Noire, July21, 1912; p. 341; 1000 w*; 35c.

Grzybowski, Dr.—*Die ostliche Grenze des Krakauer Kohlenbeckens und das mittelgalizische Becken;* [The coal seams of the east Cracow coal field and the central Galicia district].—Montanist. Rundschau, Sept.15,1912; pp. 918-925*; 50c.

Gunsolus, F. H.—*Notes on Shotfiring by Electricity.*—Coal Age, Dec.7,1912; p. 787; 2500 w; 20c.

Haenig, A.—*Die Steinkohle, ihre Gewinnung und Verwertung;* [High-grade bituminous coals; their mining and preparation].—Leipzig, 1912; pp. —*; $2 (book).

Hamilton, J.—*The Progress in Scottish Mining Methods in 60 Years;* [Presidential address, Instn. Mng. Engrs.; chiefly on mine accidents and statistics].—Instn. of Mng. Engrs. (British), Trans.; Vol. 43, No. 2; 1912; pp. 219-228*; $2.

Hamilton, G. W.—*Gathering by Electric Mine Locomotives.*—Coal & Coke Op., Dec. 5,1912; p. 356; 2500 w; 20c.

Hance, J. H.—*The Glendive Lignite Field, Dawson County, Mont.*—U. S. Geol. Survey, Bull. 471-D; 1912; pp. 89-102*; 20c.

Harrison, Geo.—*Coal Industry in Ohio in 1911;* [Preliminary report of Chief Inspector of Mines].—Coal Trade Bull., July1, 1912; p. 35; 4000 w; 25c.

Harrington, C. L.—*Mineral Resources of South America.*—See under Copper.

Hart-Davis, Hugh Vaughan.—*Emploi du Poussier de Charbon comme Combustible;* [The use of coal dust as fuel] (Abstract of communication to the Manchester Geological and Mining Society).—L'Echo de Mines, p. 1274; 900 w; 35c.

Heckmann, W.—*Schutz ges gen die Gefahren des Bergbaues;* [Protection from the dangers of mining]. (Address delivered before the Beamtenverein Glückauf at Halle, Germany).—Bergbau, Nov.14,1912; p. 646; 1500 w*; 25c.

Hedley.—*Br. Columbia.*—See under Copper.

Herald, F. A.—*The Terry Lignite Field, Custer County, Mont.*—U. S. Geol. Survey Bull. 471-D; 1912; pp. 45-89*; 10c.

Heym, W.—*Die Mineralquellem Japans;* [Mineral resources of Japan; (2) Coal,

silver-lead, zinc, iron, oil].—Kali Erz & Kohle, July15,1912; p. 699; 3200 w; 35c.

Hjorth, F.—*Spitzbergen als Kohlenland;* [Spitzbergen as a coal producing country]. —"Nordland," 1912, No. 5; pp. —; 75c.

Holbrook, E. A.—*Work of the U. S. Bureau of Mines with Reference to Coal Mining.*—Jnl. Mg. Soc., N. S., Vol. XVII, 1912; p. 33; 11 p.; 50c.

Holtedahl, O.—*Zur Kenntnis der Karbonablagerungen des westlichen Spitsbergen;* [The coal fields and Carboniferous formations of western Spitzbergen].—Christiania, 1912; pp. —; $2 (book).

Hoy, —. *Transvaal Coal vs. Natal Coal.* —S. Afr. Mng. Jnl., May18,1912; p. 420; 2000 w; 35c.

Hunter, R. and W. E. Lawrie.—*Coal Mining Practice in Southern Queensland;* [Inspectors' reports for 1911].—Qu. Govt. Mng. Jnl., July,1912; p. 323; 2500 w; 35c.

Hudson, Joseph G. S.—*Accidents in Mines.*—Jnl. Mg. Soc., N. S., Vol. XVII, 1912; p. 27; 6 p.; 50c.

Immerschitt, Engineer.—*Die Verwendung von Druckwasser zur Hereingewinnung con Kohle;* [The application of water under pressure to the mining of coal].—Berg- u. Hüttenmännische Rundschau, Nov.20, 1912; p. 40; 3800 w*; 25c.

Jackson, C. F. V.—*Queensland Mines Inspection;* [Report for 1911; extracts on coal developments, accidents, metalliferous mines, etc.].—Qu. Govt. Mng. Jnl., June, 1912; p. 266; 4200 w; 35c.

Jacquelin, —. *Note sur l'emploi des marteaux pneumatiques dans l'exploitation dans les mines de houille;* [Use of pneumatic hammer drills, and costs, in coal mines in France].—Soc. d. Ingrs. Civils France, Mémoires; May,1912; pp. 673-724*; $1.

Jeffreys, J. E.—R. T. Rhys, and E. Sweeney.—*Sixteenth Biennial Report of the State Mine Inspectors for the Two Years Ending June* 30, 1912.—Des Moines, Iowa; 1912; 110 pp.; $1.

Jennings, J. T.—*Electricity Applied to Coal Mining.*—Coal Age, Dec.7,1912; p. 779; 2000 w; 20c.

Jimenez, C. P.—*Estadistica minera en* 1909 *y* 1910; *Peru.*—See Copper.

Jorgensen, F. F.—*Handling Rock and Waste in Iowa Coal Mines;* [Compares inclined tram and aerial cableways for culm piles].—Iowa Engr., Oct., p. 3-10*; 50c.

Jüngst, E.—*Die Verteilung der britischen Kohlenausfuhr auf die verschiedenen Marktgebiete;* [Classification of the British export coal trade].—Glückauf, Nov.2, pp. 1807-1812; 45c.

Kessler, P. and H. Willing.—*Die geologische, mineralogische und paläontologische Literatur des Saarbeckens bis zum Jahre* 1910; [Bibliography of geological, mineralogical and paleontological literature of the Saar district up to 1910].—Saarbrücken, Germany, 1912; 138 pp; $2 (book).

Keyes, C. R.—*First Recorded Use of Mineral Coal in America;* [In Minnesota and Iowa].—E. & M. J., July6,1912; p. 27; 750 w; 25c.

King, Campbell.—*The Electrification of a Group of Small Collieries;* [Paper read before West of Scotland Br. Assn. Mg. Elec. Eng.].—Ir. & C. Tr. Rev,, Nov.29, 1912; p. 861; 750 w; 35c.

Knowles, Morris.—*Central Water Works System of Tennessee Coal, Iron & Ry. Co.*—Eng. Rec., Nov.23,1912; p. 564; (part 1); 5000 w*; 20c.

Koch, F. J.—*Coal Mining in the New Bosnia.*—Coal Age, Sept.21,1912; p. 389; 1700 w*; 20c.

Koehne, W.—*Geologie des Peissenberger Kohlenreviers;* [Geology of the Peissenberg coal field, south Germany].—Geogn. Jahresh, Dec.,1911, pp. 209-212; 75c.

Koenig, —. *The German Coal Trade in* 1911; [Annual report of British consul-general at Düsseldorf].—Coll'y Guardn., Sept. 6,1912; p. 496; 3000 w; tables; 35c.

Koepper, G.—*In Schacht und Hütte; Die Industrie des Ruhrkohlenbezirkes;* ["In Shaft and Smelter"; industries of the Ruhr coal mining region, Prussia].—Reutlingen, 1912; 647 pp.; 350 figs.; $7.50 (book).

Kornatzki, M. von.—*Karte der Eisen- und Kohlenindustrie in Südwestdeutschland;* [Map of the iron and coal mines and iron and coal industries of southwest Germany and vicinity].—Charlottenburg; text, and map on scale of 1:125,000; $2.

Krusch, P.—*Das Kent-Kohlenfeld, seine stratigraphischen und tektonischen Verhältnisse im Vergleich mit denen des westfälischen Steinkohlengebietes;* [The Kent coalfield, and its geologic relations with the coalfields of the Westphalia-Calais region]. —Glückauf, July6,1912; pp. 1069-1078*; 50c.

Kukuk, —. *Eine neue marine Schicht in der Gasflammkohlenpartie des Ruhr Kohlenbezirks;* [A new marine seam in the cannel-coal beds of the Ruhr basin, Germany]. —Glückauf, June15,1912; p. 947-949; 1500 w; 50c.

Kukuk, —. *Der südlichste Zechsteinaufschluss im Deckgebirge des rechtsrheinischen Steinkohlongebirges;* [The southernmost capping of Magnesian Limestone overlying the Carboniferous coal field of the Right Rhine; read to Niderrrhein. Geol. Ver; abstract].—Glückauf, June8,1912; p. 908; 1500 w*; 50c.

Laing, J.—*Annual Report of the Dept. of Mines for the Year Ending June* 30, 1911. —Charleston, W. Va., 1912; 307 pp; $1.

de Lalande, —. *Le bassin houiller d'Anvers après celui de la Campine;* [The Antwerp coal basin, Belgium, to follow after the development of Campine].—Echo d. Mines, Oct.28, p. 1126; 1000 w*; 35c.

de Lalande.—*Le bassin de la Campine en marche vers l'exploitation;* [The Campine coal basin, Belgium; progress toward development].—Echo d. Mines, Aug.29,1912; p. 932; 1200 w; 35c.

Launay, L. de., and S. Bontschew.—*Die mineralische Brennstoffe Bulgariens;* [The mineral fuels of Bulgaria].—Allgm. Oestr. Chemiker Ztg., Oct.1, p. 145; 2100 w; 35c.

Lawrie, W. E.—*A Panel System of Coal Working;* [Read to mine managers of West Moreton district].—Queensland Mng. Jnl., Oct.,1912; p. 488; 3000 w*; 35c.

Lawrie, W. E.—*Coal Mining in India;* [Read to Ipswich and W. Moreton Scient. Club].—Queensland Mng. Jnl., Sept.,1912; p. 428; 3600 w*; 35c.

Leach, W. W.—*Geology of Blairmore Map Area, Alberta;* [Coal, iron and cement].— Canada Geol. Survey, Rep. f. 1911; pp. 192-201*.

Le Chatelier, H.—*Chauffage Industriel;* [Industrial Heating by coal, gases, oil, etc., with special reference to metallurgic furnaces].—Paris, 1912; 528 pp.; 96 figs; $3 (book).

Leefelder, H.—*Unsere Brennmaterialen; Ihre Untersuchung und Verbrennung;* [Fuels, their examination and combustion]. —Berlin, 1912; 81 pp*; $1.

Lightfoot, —. *The Claims of the Great Sabi Coal Syndicate, Victoria District.*—Geol. Survey of South Rhodesia, Rep. f. 1911; pp. —; $1.

Lisse, —. *Der Kohlenbergbau in den V. S. von Nordamerika;* [The coal mining industry in the U. S.].—Techn. Blätter, Aug. 31,1912; p. 274; 1000 w; 35c.

Littler, Wm.—*Method of Working Two 5-ft. Coal Seams, 10-ft. Apart, and 1800 ft. Deep.*—Sci. & Art of Mng., Nov.9, p. 167; 500 w*; 35c.

Lupton, C. T.—*The Deep Creek District of the Vernal Coal Field, Uinta County, Utah.*—U. S. Geol. Survey, Bull. 471-I; 1912; pp. 3-13*; 10c.

Lupton, C. T.—*The Blacktail (Tabby Mountain) Coal Field, Wasatch County, Utah.*—U. S. Geol. Survey, Bull. 471-I; 1912; pp. 19-48*; 10c.

Lux, Fr.—*Stand der Entwickelung des Steinkohlenbergbaues in China zu Beginn der Revolution im Herbst 1911 und zukünftige Ziele;* [Status of the development of coal mining in China to the beginning of the revolution in the fall of 1911, and future prospects].—Zts. für praktische Geologie, Oct.,1912; p. 191; 11,200 w*; 75c.

Mainwaring, R. D.—*Mine No. 9 of the Penna. Coal & Coke Co., Cresson, Pa.*—Coal Age, Nov.2,1912; p. 660; 1200 w*; 20c.

Malloch, C. S.—*Reconnaissance on the Upper Skeena River, between Hazelton and the Groundhog Coal Field, B. C.*—Canada Geol. Survey, Rep. f. 1911; pp. 72-90*.

Malloch, C. S.—*Notes on the Groundhog Coal Basin, Brit. Columbia.*—Canadian Mng. Inst., Trans.; Vol. 15, Pt. 1; 1912; pp. 22-25; $1.15.

Manning.—*Mining Development in Colombia.*—See Colombia.

Marks, E. O.—*Tannymorel Coal Mine.*—Queensland Mng. Jnl., Oct.,1912; p. 485; 800 w*; 35c.

Marks, E. O.—(1) *Coal near Chinchilla;* (2) *Coal with Glossopteris Flora near Hughenden.* — Queensland Geol. Survey, Publ. No. 235; (1), pp. 14-17; (2), 18-20.

Marks, E. O.—*Prospects of Coal at Esk.*—Queensl. Govt. Mng. Jnl., July,1912; p. 322; 1000 w; 35c.

Marks, J. B., and Alley, Gerald.—*The Colorado Fuel & Iron Co.'s Rockville Mine.*—Coal Age, Nov.30,1912; p. 744; 2500 w*; 20c.

Martell.—*History of Mining Industry in Russia* [in German].—See under Gold.

Martin, Al H.—*Exploiting Nevada's Coal Deposits.*—Coal Age, Oct.19, p. 552; 600 w; 20c.

Matthews, T. J.—*The Production of Coal-dust in Mines;* [Reviews the various means of producing dust underground].—Mng. Engg., Oct.,1912; p. 182; 800 w; 35c.

Mavor, S.—*Die maschinelle Kohlengewinnungsarbeit mit besonderer Berücksichtigung der Grubenverhältnisse in Süd-Wales;* [Machine Coal Mining, with Special Reference to Mining Conditions in South Wales; translated from the English by A. Holan].—Witkowitz; 1912; 88 pp.; $2 (book).

McBride.—*British Columbia Mines Report for 1911.*—See under Zinc.

McCale, C. H.—*Pillar Working in the Raniganj and Jharia Coal-Fields.*—Mng. & Geol. Inst. of India, Trans.; Vol. 7, No. 1; 1912; pp. 42-69*; $1.

McIntyre, Wm., Jr.—*Battle Creek Coal Mine, Tennessee.*—M. & M., Dec., 1912; p. 237; 3000 w*; 35c.

McMahon, S.—*Solving a Low-Coal Problem;* [Machine Mining of a 20-inch seam, Indiana county, Pa.].—Coal Age, Aug.24, 1912; p. 246; 800 w; 20c.

Mettrier and Léon.—*L'industrie minérale dans le Nord et Pas-de-Calais;* [Statistics and technical review of coal mining in Nord and Pas-de-Calais; abstracts of official reports f. 1911].—Echo d. Mines, Sept.12,1912; p. 962; Sept.19, p. 980; 5000 w; 35c.

Michael, Dr.—*Die neuen Aufschlussbohrungen im westgalizischen Steinkohlenrevier;* [Newer prospect borings, and present status of knowledge as to the extension of the west Galician coal field].—Oberschles. Berg- & Hüttenm. Ver., Zts.; Sept.,1912; p. 394-414; 45c.

Milch. — *Deutschlands Bodenschätze;* [Mineral wealth of Germany; coal and salt deposits].—Leipzig, 1912; 151 pp; 41 figs; $1 (book).

Mitchell, J. C.—*Early Mining of Coal in Glace Bay District, C. B.*—Canadian Mng. Jnl., Aug.15,1912; p. 547; 3500 w*; 25c.

Müller, Fr. C.—*Die diluvialen Kohlen in der Schweiz;* [Glacial coal deposits in Switzerland].—Zts. f. prakt. Geologie, Aug., 1912; pp. 289-301*; 75c.

Nicholson, Neil A.—*Conservation of Nova Scotia Coal Fields.*—Jnl. Mg. Soc., Nova Scotia, Vol. XVII, 1912; p. 17; 10 p.; 50c.
Abstract in Canadian Mng. Jnl., Oct.1, 1912; p. 671; 2500 w; 25c.

Norwood, C. J.—*Kentucky Output Figures Show a Big Decrease;* [Abstract of official state report for 1911].—Black Diamond, Sept.7,1912; p. 22; 2000 w; 25c.

Olin, H. L.—*Coal Alteration at Lower Temperatures and the By-Products.* (Bull. No. 60, Eng. Exp. Sta., Univ. Illinois; abstract).—Mg. & Eng. World, Dec.14,1912; p. 1097; 750 w; 10c.

Owens, W. D.—*The Increased Cost of Mining Anthracite.*—Mines & Minerals, Aug.,1912; p. 26; 1600 w; 35c.

Parker, Edw. W.—*The production of Coal in 1911.*—U. S. Geol. Survey, Mineral Resources for 1911; 1912; 207 pp.; 20c.

Parker, E. W.—*Facts about Anthracite Mining;* [Early and recent development of the industry].—Mines & Minerals, Nov., p. 202; 1500 w; 35c.

Parker, E. W.—*Coal Production in U. S. for 1911;* [Summary tables, U. S. Geol. Survey].—Coal Trade Bull., Aug.1,1912; p. 25; 1200 w; tables; 25c.

Parker, E. W.—*Coal Resources of the United States.*—Canadian Mng. Inst., Trans.; Vol. 15, Pt. 1; 1912; pp. 32-37*; $1.15.

Parker, Edw. W.—*The Production of Anthracite Coal in 1911;* [in Pennsylvania]. —U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 13 pp; 10c.

Patterson, W. H.—*Spitzbergen Coal;* [Analyses].—Cheml. News, June14,1912; p. 277; 500 w; 45c. Abstract in Soc. of Cheml. Ind'y, Jnl.; July31, p. 674; 100 w; 65c.

Péchadre.—*Mining in France.*—See Iron.

Pepperberg, L. J., and W. R. Calvert.—*Coal Fields in Montana.*—U. S. Geol. Survey, Bull. 471-E; 1912; 66 pp*; 10c.

Perkins, Frank C.—*Boring Long Holes in*

Mine Workings.—Pac. Mg. Jnl., Dec.,1912; p. 105; 2500 w*; 30c.

Petrascheck, W.—*Die Kohlenvorräte Oesterreichs;* [Coal supplies of Austria].—Montanist. Rundschau, Sept.15,1912; p. 938; 1000 w; 45c.

Phillips, W. B.—*The Lignite Industry in Texas;* [Discusses gas-producer plants].—Coal Age, Aug.10,1912; p. 187; 1200 w; 20c.

Pickering, W. H. and B. H.—*Why Leave Shaft Pillars?* [Read to Instn. of Mng. Engrs., June,1912].—Coll'y Guardn., June7, p. 1132; June14, p. 1191; 6000 w*; 50c. Also in Iron & Coal Trades Rev., June7, p. 909; June14, p. 947; 6000 w*; 50c. Also in Sci. & Art of Mng., June22, p. 535; 1500 w*; 35c.

Pishel, M. A.—*Lignite in the Fort Berthold Indian Reservation, N. Dak., north of Missouri River.*—U. S. Geol. Survey, Bull. 471-C; 1912; 19 pp.*; 10c.

Pittman, F.—*The Coal Resources of New South Wales.*—N. S. W. Geol. Survey Publ., 1912; pp. —; 75c.

du Poizat, C.—*Notre commerce extérieur en combustibles et fers;* [Imports and exports of coal, coke, briquets, iron and steel 1st half-year 1911 in France].—Echo d. Mines, Aug.8,1912; p. 882; 600 w; 35c.

Potonié, H.—*Ueber die Entstehung der Steinkohle;* [The origin of coal; read to the 26th Wandersammlung Internatnl. Ver. Bohringr. & Bohrtechniker].—Organ d. Bohrtechniker, Oct.1, p. 221; Oct.15, p. —; 5000 w; 50c.

Powell, J. W.—*Mining a Thick Vertical Coal Seam;* [Coalmont, B. C.].—Coal Age, Aug.17,1912; p. 220; 1800 w*; 20c.

Prouty, Wm. Frederick.—*Map of the Coosa Coal Field (Alabama), with Vertical and Horizontal Sections.*—Geological Survey of Alabama.

Purdue, A. H.—*Observations on the Education of Coal-Mine Foremen;* [Address delivered before Soc. of Tennessee Mine Foremen; abstract].—Mg. & Eng. World, Nov.30,1912; p. 993; 1300 w; 10c.

Ramsay, E.—*European Mine Practices Contrasted with Mining Practices in the U. S.;* [Report of American commission to Europe. 1911; read to Alabama Coal Operators' Asso. June,1912].—Coal & Coke Op., July25, p. 49; 4400 w; 25c.

Raymond, R. W.—*Japan's Mining Industry.*—Oriental Rev., 1912, No. 5; pp. 278-283; 75c.

Recktenwald, J.—*Electrische Streckenförderung mit Akkumulator-Lokomotiven;* Electrical underground haulage with accumulator locomotives]; (part 1).—Fördertechnik, Nov.,1912; p. 242; 2000 w*; 65c.

Redmayne, H.—*Output of Minerals and the Use of Coal-Cutting Machinery in 1911, in U. K.;* [from official report].—El. Rev. (London), Sept.6,1912; p. 395; 2100 w; 35c.

Roberts, W., and O. Cartlidge.—*Buckner No. 2 Mine;* [Modern surface and underground equipment in Franklin county, Ill.].—Mines & Minerals, Oct.,1912; p. 121; 2500 w*; 35c.

Robinson, N.—*West Virginia on the Brink of a Labor Struggle;* [Difficulties in Paint Creek and other districts].—W. Va. Mng. Asso., paper; 1912; 7 pp.; 50c.

Roderick, Jas. E.—*Report of Department of Mines of Pennsylvania for* 1911.—Dep. of Mines of Pa., Part 1 (Anthracite), pp* 672; Part 2 (Bituminous), pp* 960.

Abstract in Coal Trade Bull., Sept.2, p. 23; 1000 w; 35c.

Sandilands, G.—*Transvaal Coal Export Trade.*—S. Afr. Mng. Jnl., July27,1912; p. 804; p. 813; Aug.3, p. 859; 4200 w; 50c.

Scheerer, —. *Die Braunkohlenvorkommen des Grossherzogtums Hessen;* [Lignites of the grand-duchy Nessen].—Braunkohle, Oct.,11, pp. 437-443; Oct.25, pp. 469-474; Nov. 8, pp. —; 85c.

Scholtze, G.—*Beitrag zum Abbau stehender Flötze;* [The mining of vertical coal seams].—Kohle & Erz, Aug.5,1912; p. 806; 750 w; 35c.

Seddon, Wm.—*Mines of the Crucible Coal Co.;* [Green county, Pa.].—Coal & Coke Op., Sept.26,1912; p. 193; 3700 w; 25c.

Shaw, A. H.—*The Arkansas Semi-Anthracite Field.*—Coal Age, Oct.12, p. 487; 1300 w*; 20c.

Shubart, B.—*Midland Mine of the Rocky Mountain Fuel Co.;* [Sunlight, Colorado].—Coal Age, July27,1912; p. 116; 750 w*; 20c.

Shurick, A. T.—*The Federal Valley Field in Ohio.*—Coal Age, June29,1912; p. 1236; 2100 w*; 20c.

Silliman, W. A.—*Squeezes and Creeps in the "B" Seam* (Pennsylvania).—Coal & Coke Op., Dec.5,1912; p. 362; 1000 w; 20c.

Silliman, W. A.—*Big Pillar System of Mining;* [Lower Kittanning vein in Cambria county, Pa.].—Coal Mng. Inst. of Amer., Proc. for 1911; 1912; pp. 75-89*.

Stansfield, E.—*The Determination of Moisture in Fuels.*—Canada Dept. Mines, Mines Branch, Report for 1911; 1912; pp. 123-137.

Stebinger, E.—*The Sidney Lignite Field, Dawson County, Mont.*—U. S. Geol. Survey, Bull. 471-D; 1912; pp. 102-137*; 10c.

Steel, A. A.—*Coal Mining in Arkansas, Volume* 1.—Ark. Geol. Survey, Report; 1912; 632 pp.*; (book).

Stevenson, J. J.—*The Formation of Coal Beds; Part II.*—Amer. Philos. Soc., Proc., 1911; pp. 513-643; $2.

Stoek, H. H.—*Geology, Mining and Preparation of Anthracite.*—Western Soc. of Engrs., Jnl.; Oct.,1912; p. 705-735*; 65c; abstract in Black Diamond, July13,1912; p. 15; 5500 w*; 30c.

Stone, S. R.—*Application of Electric Power for Coal Mining.*—Mg. & Eng. World, Dec.14,1912; p. 1085; 4500 w*; 10c.

Strahan, A. — *The Ebbsfleet Boring;* [near Ramsgate; Kent coal field; from appendix to report of Geol. Survey of Gt. Britain f. 1911].—Iron & Coal Trades Rev., July12,1912; p. 55; 1200 w; 35c.

Svimonoff.—*Data of Russia's Principal Mines and Oil Wells.*—See under Gold.

Thompson, A.—*Maltby Main Colliery;* [Surface and underground plant and operation; read to Midland Inst. of Mng. Civil & Mechl. Engrs.].—Iron & Coal Trades Rev., Oct.11, p. 599; 2100 w; 35c.

Tonge, J.—*The Principles and Practice of Coal Mining.*—London, 1912; 372 pp; $1.50 (book).

Udhaug, A.—*Coal and Coal Mining in Spitzbergen.*—Iron & Coal Trades Rev., June28,1912; p. 1040; 1500 w*; 35c.

Uhlmann, P. W.—*Heizversuche mit schlesischen Kohlen;* [Calorific tests of Silesian coals].—Chemiker Ztg., Sept.17,1912; p 1058; 750 w; 35c.

Verband polnischer Berg- & Hüttenleute in Oesterreich.—[*Monograph of the geology, mining technology and economics of the coal industry of Poland* (in Polish)].—Published by the Society, 1912; 4 volumes.

Vernon, R. D.—*Geology and Paleontology of the Warwickshire Coalfield* [and so-called Permian rocks; read to Geol. Soc. of London; abstract].—Iron & Coal Trades Rev., Aug.2,1912; p. 161; 2000 w; 35c; also in Coll'y Guardn., Aug.30,1912; p. 430; 1500 w; 35c.

Virgin, R. Z.—*Working an Underlying Seam of Coal.*—Coal Age, Sept.7,1912; p. 331; 400 w*; 20c.

Wadleigh, F. R.—*An Engineer on the West Coast of Colombia;* [with special reference to investigation of coal resources].—Pan-American Union, Bull.; Oct.,1912; pp. 726-734*; 35c.

Weber, W., and Hirschmann, W.—*Die Anwengung des Spülversatzverfahrens zu Abraumarbeiten in Braunkohlentagebaugruben;* [The application of the hydraulic stowing method to the disposal of waste in open-cut brown-coal mines; (reprint from Braunkohle). — Kohleninteressent, Nov.15, 1912; p. 278; 4400 w*; 35c.

Wegemann, C. H.—*The Sussex Coal Field in Johnson, Natrona and Converse Counties, Wyoming.*—U. S. Geol. Survey, Bull. 471-F; 1912; pp. 21-51*: 10c.

Whiteside, F. W.—*Central Coal Fields in Colorado;* [Walsenburg and Canon City fields].—Coal Age, July6,1912; p. 2; 2000 w*; 20c.

Willert, H.—*Geologie der fünf grossen preussischen Steinkohlenablagerungen;* [Geology of the 5 major coal fields of Prussia].—Leipzig, 1912; $1.75 (book).

Williams, C. L. L.—*Kaying Coalfields in China.*—U. S. Consul. Rep., July17,1912; p. 299; 250 w; 20c.

Williams, J. H.—*The Lathrop Coal Co., Panther, W. Va.*—Mines & Minerals, Nov.,

Winchester, D. E.—*The Lost Spring Coal Field, Converse County, Wyoming.*—U. S. Geol. Survey, Bull. 471-F; 1912; pp. 52-95*; 10c.

Wittich, Lucius L.—*Electric Shot Firing in Coal Mines.*—M. & M., Dec.,1912; p. 243; 1250 w*; 35c.

Wittich, Lucius L.—*The Hamilton No. 8 Mine, Kansas.*—M. & M., Dec.,1912; p. 255; 1500 w*; 35c.

Woodruff, E. G. and D. E. Winchester.—*Coal Fields of the Wind River Region, Fremont and Natrona Counties, Wyom.*—U. S. Geol. Survey, Bull. 471-G; 1912; 53 pp*; 20c.

Wrenacre, H.—*The Coal Mining Industry in the Hokkaido;* [Abstract of British special consular report].—Coll'y Guardn., Sept.13,1912; p. 535; 8000 w; 35c.

Young, C. M.—*Dust Explosions in Coal Mines.*—M. & M., Dec.,1912; p. 258; 3000 w; 35c.

Comité Central des Houillères de France.—*Annuaire, Tome 18;* [18th. Yearbook of the coal and iron mines of France].—Paris, 1912; (book).

Gt. Britain Geol. Survey.—*Summary of Progress for* 1911; [Geological research in the various coalfields].—Coll'y Guardn., July19,1912; p. 120; July26, p. —; 9000 w; 50c. Extract on Scotch coalfields, in Iron & Coal Trades Rev., July12, p. 46; 4500 w*; 35c.

N. Zealand Royal Commission on Mines.—*Report;* [on accident prevention, ventilation, underground sanitation, change and bath houses, miners' phthisis and utilization of low-grade coals of Westport district].—Iron & Coal Trades Rev., May31, 1912; p. 871; June 7, p. 922; 10,000 w; 50c.

———. *Activities in the Southern Appalachian Field;* [New railroad and transportation developments for export business in Alabama, Va., Ky. and Tenn.].—Black Diamond, Aug.17, p. 16; 1200 w; 30c.

———. *An Explosion Due to Shot-Firing.*—Coal Age, Nov.30, 1912; p. 760; 2000 w; 20c.

———. *Astounding Growth of the American Coal Output.*—Black Diamond, Oct.5, 1912; p. 30; 2500 w; 30c.

———. *A Successful Natal Colliery; Natal Navigation Collieries & Estate Co., Ltd.*—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 382; 1000 w; $1.

———. *Austrian Mines.*—Mg. Jnl. (London), Nov.16,1912; p. 1115; 2000 w; 35c.

———. *Baggeridge Colliery;* [Excursion of Instn. of Mng. Engrs. to Birmingham, Engl.].—Coll'y Guardn., Sept.27,1912; p. 633; 1500 w; 35c.

———. *Bergwerke und Salinen im niederrheinisch-westfälischen Bergbaubezirk im J.* 1911; [Mines and salt works in the Lower Rhine-Westphalian mining district, 1911].—Essen, 1912; 90 pp.; 75c (pamphlet).

———. *Bericht über den rheinischwestfälischen Kuxenmarkt für* 1911, *und statistische Mitteilungen ü. die wichtigsten Kohlen- und Kaligewerkschaften;* [Review of the Rhine-Westphalian share market in 1911, and statistics of the leading coal and potash companies].—Düsseldorf, 1912; 16 pp.; 80c.; pamphlet).

———. *Bericht des Vorstandes des Zentralvereins der Bergwerksbesitzer Oesterreichs;* [Report of the mine-owners' association of Austria for 1911; statistics of coal, coke, lignite and briquet production, imports and exports].—Montanist. Rundschau, June 1,1912; pp. 501-516; 45c.

———. *Beitrag zur Kenntnis des südböhmischen Braunkohlenbeckens;* [Notes on the South Bohemia coal field].—Hor. & Hut. Listok, No. 8, 1912; pp. 111-113; 75c.

———. *British Exports of Fuel;* [1st semester, 1912].—Iron & Coal Trades Rev., July12,1912; p. 62; tables; 35c. Also in Coll'y Guardn., July12, p. 87; tables; 35c.

———. *Cannel Coal, Like Stove Wood, is Cut with an Axe;* [Output of Cannel City mines, Kent'y].—Black Diamond, Oct.5, 1912; p. 52; 5000 w*; 30c.

———. *Coal Deposits in the Province of Magdalena, Colombia.*—Mng. World (London), Oct.5,1912; p. 403; 500 w; 35c.

———. *Coal Discoveries in British Columbia;* [Groundhog Mountain field].—Coal Trade Bull., Nov.15, p. 36; 4000 w; 25c.

———. *Coal Exports and Bunker Shipments in* 1911; [British statistics for 1910 and 1911 by ports and destination].—Iron & Coal Trades Rev., June7,1912; p. 914; 1000 w; tables; 30c.

———. *Coal in the Federated Malay States.*—Coal Age, June29,1912; p. 1248; 500 w; 20c.

———. *Coal Mine Supports in Germany;* [Zeitschrift fur das Berg- Hutten-U. Salinewesen; abstract].—M. & M., Dec., 1912; p. 240; w*; 35c.

———. *Coal Mines of the Nova Scotia Steel Coal Co.*—Canadian Mng. Jnl., Sept. 15,1912; p. 626; 6000 w*; 35c.

———. *Coal Mines of North China;* [Chinese Engg. & Mng. Co., Ltd.].—M. & S. P., July27,1912; p. 117; 700 w; 20c.

———. *Coal Mining Development in Hol-*

land.—Iron & Coal Trades Rev., Aug.30, 1912; p. 314; 500 w; 35c.

———. *Coal Mining.*—Sci. & Art of Mining, Nov.23,1912; p. 174; 1200 w*; 25c.

———. *Coal Production in Belgium, France and Austria;* [1st. semester, 1911]. —Iron & Coal Trades Rev., Aug.9,1912; p 202; 500 w; 35c.

———. *Coal Prospects in the Frazer Valley, B. C.*—B. C. Mng. & Engg. Record, May,1912; p. 316; 4500 w; 35c.

———. *Coal Resources of the Upper Skeena; Mining Developments Around Hazleton;* [Groundhog Mtn. coal field, Br. Columbia].—B. C. Mng. & Engg. Record, April, 1912; p. 278; 8000 w*; 35c.

———. *Coalfields of the Consolidation Coal Co.*—Black Diamond, Oct.5,1912; pp. 40-46*; 30c.

———. *De Kolenmijnbouw in Nederland in het bijzonder het Staatsmijnbedrijf;* [Coal mining in the Netherlands, with special reference to state-owned mines].—Tijdschr. van Nijverheid, No. 5, 1912; pp. 225-238.

———. *Der Siegeszug der Braunkohle;* [Phenomenal growth of the lignite industry in Germany since 1895].—Deu. Bergwerks Ztg., Aug.22,1912; p. —; 1200 w; 35c.

———. *Der Steinkohlenbergbau im Saargebiet;* [The coal mining industry of the Saar region; fiscal and private production]. —Deu. Bergwerks Ztg., Sept.21,1912; p. 1; 1600 w; 35c.

———. *Die belgische Kohlenförderung im ersten Halbjahr* 1912; [Belgian coal production, first half-year 1912].—Deu. Bergwerks Ztg., Aug.15,1912; p. 1; 750 w; tables; 35c.

———. *Die Braunkohlenvorkommen des Königreiches Sachsen;* [The lignite resources of Saxony].—Zts. f. prakt. Geologie, Sept.,1912; p. 381; 500 w; 55c.

———. *Die Braunkohlenindustrie der Niederlausitz und Ostdeutschlands;* [Lignite industry of Lower Lausitz and east Germany in 1911].—Deu. Bergwerks Ztg., Aug.30,1912; p. 1; 1000 w; table; 35c.

———. *Die Entwickelung des belgischen Kohlenbergbaus;* [Development of the Belgian coal mining industry; production, prices, etc., since 1850].—Deu. Bergwerks, Ztg., June8,1912; section 6; 5000 w; 35c.

———. *Die Förderung von Steinkohlen in Bulgarien;* [Coal production of Bulgaria, 1901-1911].—Nachricten f. Handel & Industrie, No. 15, 1912; p. 3; 75c.

———. *Die ungarische Kohlenindustrie;* [Development of the Hungary coal industry].—Deu. Bergwerks Ztg., July16,1912; p 1; 2000 w; 35c.

———. *Die Kohlentransportanlage des städtischen Elektrizitätswerks I in Frankfurt a. M., erbaut als Elektrohängebahn von Adolf Bleichert & Co., Leipzig;* [The coal-transportation plant of the municipal electric plant I in Frankfort on the Main, constructed as an electric suspended railroad by Adolf Bleichert & Co., Leipzig].—Rigasche Industrie-Zeitung, Oct.15,1912; p. 289; 1800 w*; 35c.

———. *Development in the Elkhorn Coal Field, Eastern Kentucky.*—Coal & Coke Op., Sept.12,1912; p. 161; 1600 w*; 25c.

———. *Ein- und Ausfuhr des deutschen Reiches an Baumaterialen;* [Imports and exports of Germany, including fuel].—Deu. Kohlen, Ztg., Feb.10,1912; p. 66-67; 75c.

———. *Eine Verschmelzung in der chinesischen Bergwerkindustrie;* [Amalgamation Chinese Engg. & Mng. Co., Ltd., with Luantschau Mines (Grand Mng. Co. of Peyang & Lanchow].—Deu. Bergwerks Ztg., June19,1912; p. 1; 1500 w; 35c.

———. *Electric Haulage Gear for India.*—Ir. & Coal Tr. Rev., Nov.22,1912; p. 835; 1500 w*; 35c.

———. *Electricity in Brown Coal Mines and Mining;*]Developments in Germany]. —Coal Age, Aug.3,1912; p. 142; 2000 w*; 20c.

———. *Entwickelung des Steinkohlenbergbaues im Oberbergamtsbezirk Dortmund seit* 1850; [Statistics of coal mining production, personnel, etc., in the Dortmund district, 1850-1911]. — Glückauf, Aug.10, 1912; p. 1305; tables; 50c.

———. *Entwickelung und gegenwärtiger Stand des Kohlenbergbaues und Kohlenhandels in Japan;* [Development and present status of coal mining and of the coal trade in Japan].—Bericht ü Handel & Ind., 1912, No. 2; pp. 66-92.

———. *Ergebnisse der Ruhrkohlenzechen im 2ten Vierteljahr* 1912; [Coal output, by companies, Ruhr basin, Prussia; quarterly 1911-1912].—Deu. Bergwerks Ztg., Aug.7,1912; p. 1; 500 w; tables; 35c.

———. *Essential Requirements of Good Safety Lamp.*—Coal Age, Nov.23,1912; p. 725; 1000 w; 20c.

———. *Evolution of Electrical Machinery in Mines;* [Discussion of paper read before Assn. of Mg. & Elec. Eng. at Sheffield].—Ir. & Coal Tr. Rev., Nov.22,1912; p. 822; 5000 w; 35c.

———. *Geological Discoveries in the Hainault Coal Field, Belgium.*—Coll'y Guardn., Oct.18, p. 799; 1600 w; 35c.

———. *Guarding Trolley Wires in Mines.* —Coal Age, Dec.7,1912; p. 808; 500 w*; 20c.

———. *How Pocahontas Coal Became Known.*—Black Diamond, Oct.5,1912; p. 34; 1600 w*; 30c.

———. *Important British Collieries;* [Cortonwood surface plant and mining, Wombwell; coke ovens and by-product plant].—Coal Merchant & Shipper, No. 610, 1912; p. 513-4*; 50c.

———. *Industrie Minérale dans le Nord et Pas-de-Calais en* 1911; [Abstracts of official reports on mining in Nord and Pas-de-Calais, France, in 1911].—Soc. Amicale de Douai, Bull.; Oct.10, p. 661-680; Oct.25, pp. 700-712; 50c.

———. *Inspection of the Clifton Colliery, Nottingham;* [by Natnl. Asso. of Coll'y Managers].—Iron & Coal Trades Rev., July26,1912; p. 129; 1000 w*; 35c.

———. *Italian Coal, Iron and Steel Industries in* 1911.—Iron & Coal Trades Rev., Nov.1, p. 709; 1500 w; 35c.

———. *Kohlen Ein- und Ausfuhr Oesterreich-Ungarns im Jahre.* 1911; [Coal imports and exports of Austria-Hungary, 1911].—Nachrichten f. Handel & Industrie, No. 22, 1912; p. 3; 75c.

———. *Kohlenein- und Ausfuhr Oesterreichs im 1.-Halbjahr* 1912; [Coal imports and exports of Austria, 1st half-year of 1912].—Glückauf, Sept.14,1912; p. 1516; tables; 35c.

———. *Kohlengewinnung Oesterreichs, 3 ersten Vierteljahren,* 1912; [Coal production of Austria, first 3 quarters of 1911]. —Glückauf, Nov.2, p. 1815; 500 w; tables; 45c.

———. *Kohlenproduktion der Welt im*

Jahre, 1911; [World's coal production, 1911].—Nachr. f. Handel & Industrie, 1912, No. 22; p. 4; 75c.

———. *Kolenproduktion der Welt;* [World's coal production, 1910].—Bergbau, June27,1912; p. 361; 1400 w; 35c.

———. *Kusnezk district, Altai;* [in German].—Riga Industrie Ztg., May15, p. 138; 600 w; 35c.

———. *Jamison Coal & Coke Co. Mines and Plant, Farmington, W. Va.*—Black Diamond, Aug.17,1912; p. 16; 1500 w*; 30c.

———. *La production du Nord et du Pas-de-Calais pendant le premier semestre* 1912; [Coal production in the departments of Nord and Pas-de-Calais, 1st half year 1912].—Echo d. Mines, July25,1912; p. 853; tables; 35c.

———. *L'avenir de l'industrie houillère en Hongrie;* [Future of the coal mining industrie in Hungary].—Soc. Amicale Ecole Douai, Bull.; Aug.25,1912; p. 570; 1800 w; 35c.

———. *Mines and Mining in China.*—China Yearbook, 1912; pp. 50-54.

———. *Mines and Mining in Japan.*—Japan Yearbook, 1912; pp. 318-332.

———. *Minerals in the Arctic;* [Coal, copper, lead].—Mng. Jnl, Oct.5,1912; p. 987; 1500 w; 35c.

———. *Minerals of Primorsk Province, Russia.*—Mining & Engg. World, Aug.31, 1912; p. 387; 1200 w; 10c.

———. *Mineral Production of the U. S. in* 1911. (U. S. Geol. Surv. publication).—Mg. & Eng. World, Dec.14,1912; p. 1007; 500 w; 10c.

———. *Mines of Mitsu Bishi Goshi-Kwaisha, Japan;* [Describes the properties of the Mitsu Bishi Co., owning 21 metal and coal mines].—Mg. & Eng. World, Nov. 23,1912; p. 941; 5000 w*; 10c.

———. *New Coal Field in Kent, England.*—Coal Age, June29,1912; p. 1250; 1000 w; 20c.

———. *Om Spitzenbergen's Kulforekomster;* [The coalfields of Spitzbergen].—Tekn. Ugeblad, 1912; No.10; pp. 135-137*; 50c.

———. *Our Coal Shipping Trade;* [British exports and prices, Jan.-Sept., 1912].—Iron & Coal Trades Rev., Oct.11, p. 601; 1200 w; 35c.

———. *Overwind Prevention in England.*—Coal Age, Nov.23,1912; p. 711; 2000 w*; 20c.

———. *Past and Future of the Connellsville Coke Region.* (Address delivered to the Freight Track Officers of the Pennsylvania R. R.).—Coal & Coke Op., Nov. 21,1912; p. 321; 2200 w; 20c.

———. *Production des combustibles;* [Coal and lignite production in France, 1st semester, 1912, by departments and districts].—Rev. Noire, Sept.1,1912; p. 402-404; tables; 35c.

———. *Production houillère;* [Coal, coke and briquet production of Nord and Pas-de-Calais, 1912, 1911].—Soc. Amicale Ecole Douai, Bull.; Aug.10,1912; p. 532-542; 35c.

———. *Proposed Workmen's Compensation Act for Pennsylvania.*—Coal Tr. Bull., Dec.2,1912; p. 30; 5000 w; 25c.

———. *Schwarze und weisse Kohle in der Schweiz;* [Competition between coal and hydroelectric power in Switzerland].—Organ d. Bohrtechniker, Sept15,1912; p. 214; 1800 w; 45c.

———. *Sizing and Sorting Coal in England.*—Coal Age, Nov.23,1912; p. 712; 1000 w*; 20c.

———. *[Smokeless Fuel Co. Plant, Pocahontas field, W. Va.*].—Black Diamond, Oct. 5,1912; p. 48; 4500 w*; 30c.

———. *South Wales Coal and Iron Companies,* 1912; *7th Edition.*—Cardiff, 1912; $2.50 (book).

———. *Southern Kentucky Coal Field;* [Geology, mining methods and plant of the Stearns Co.].—Mines & Minerals, Sept. 1912; p. 63; 2400 w*; 35c.

———. *Spanische Montanindustrie;* [Spanish production of coals, 1895-1910].—Techn. Blätter, Aug.31,1912; p. 275; 600 w; tables; 35c.

———. *Spitzbergen; Russian Claims.*—Mng. Jnl., Nov.2, p. 1061; 1000 w; 35c.

———. *Statistik des Kohlenbergbaues im Oberbergamtsbezirk Breslau;* [Statistics of coal production, Breslau district, 2d quarter, 1912].—Kohle & Erz, Aug.19,1912; p. 862; tables; 35c.

———. *Statistische Angaben über die Belgische Kohlenförderung;* [Statistics on Belgian coal production, 1831-1911].—Techn. Blätter, Sept.7,1912; p. 283; 2000 w; tables; 35c.

———. *Statistique des industries extractives et métallurgiques en Belgique* 1911; [Statistics of mining and metallurgic production, wages, labor, etc., in Belgium, 1911].—Annales d. Mines (Belgiq.), Vol. 17, No. 4; 1912; pp. 989-1088; 65c.

———. *Statistique; Production des combustibles minéraux, des fontes et aciers;* [Statistics of mineral production of France, 1910 and 1911; coal, lignite, pig-iron and steels; from Jnl. Officiel, March 3 and 17].—Ann. d. Mines (Paris), June,1912; pp. 555-561; 90c. Also in Soc. Amicale Ecole Douai, Bull.; June10, p. 340-351; 35c.
German abstract in Glückauf, July13, pp. 1129-1132; 50c.

———. *Stein- und Braunkohlenbergbau in Preussen I. Viertel-Jahr* 1912; [Statistics of coal and lignite mining in Prussia, 1st quarter, 1912].—Zts. f. Berg-, H-, & Salinenw., Vol. 60, No. 2, p. 109; 90c.

———. *Stein und Braunkohlenbergbau Preussens im I. Halbjahr* 1912; [Statistics of coal production in Prussia, 1st half-year 1912].—Glückauf, Aug.24,1912; p. 1381; 500 w; tables; 50c.

———. *Steinkohlen Ein- und Ausfuhr der Niederlände,* 1911; [Coal imports and exports of the Netherlands, 1911].—Nachrichten f. Handel & Industrie, No. 22, 1912; p. 4; 75c.

———. *Subject List of Works on Mineral Industries in the Library of the Patent office; Part* 1: *Coal Mining.*—London, 1912; U. K. Pat. Office, Publication, New Series, Wn-XN. 39; 50c.

———. *Surveying* [coal mining].—Sci. & Art of Mg., Nov.23,1912; p. 176; 2000 w; 25c.

———. *Svenska kol;* [Swedish coals].—Affärsvärlden, No. 49, 1911; p. 1369-1397; 75c.

———. *Syndizierte und nichtsyndizierte Zechen im niederrheinisch-westfälischen Bergbaubezirk;* [Syndicate and non-syndicate coal production, Rhine-Westphalia, 1st half-year 1912].—Deu. Bergwerks Ztg., Aug.23,1912; p. 1; Aug.28, p. 1; 2500 w; 50c.

———. *The Adair Face-Conveyor.*—Coll. Guard., Nov.22,1912; p. 1035; 2000 w*; 35c.

———. *The Burnwell Coal Co., in Illi-*

nois; [Mining No. 6 seam, near St. Louis]. —Coal Age, July13,1912; p. 38; 1200 w*; 20c.

———. *The Coal Deposits of Servia.*—Coal Age, July13,1912; p. 53; 1000 w; 20c.

———. *The Coal Industry in Queensland.*—Qu. Govt. Mng. Jnl., Sept.,1912; p. 426; 800 w*; 35c.

———. *The Coal Mining Industry of South Africa;* [Transvaal and Natal developments].—Afr. World, Aug.10,1912; p. 17; 1000 w; 35c.

———. *The Coal Mining Industry of Japan.*—Coal Age, Nov.23,1912; p. 718; 1500 w; 20c.

———. *The Coal Resources of the British Crown Colonies and Protectorates; I: W. Indies, Trinidad, Southern Nigeria, Nyasaland, E. Africa.*—Imperial Inst., Bull.; Oct.,1912; p. 434-453.

———. *The Coal Trade of Lancashire.* —Coal Merchant, No. 627, 1912; pp. 315-337*; 35c.

———. *The Consolidation Coal Co.'s Operations in Kentucky.*—Coal Age, Sept.28, 1912; p. 428; 600 w*; 20c.

———. *The Derringer Anthracite Stripping;* [Derringer, Pa.].—Mines & Minerals, Aug.,1912; p. 5; 1000 w*; 35c.

———. *The German Lignite and Briquet Industry in* 1911.—Iron & Coal Trades Rev., July26,1912; p. 132; 1000 w; 35c.

———. *The Half Year's Coal Trade;* [Reviews first semester, 1912, in Gt. Britain].—Coll'y Guardn., July19,1912; p. 131; 2000 w; 35c.

———. *The Jasper Park Collieries, Pocahontas, Alberta.*—Canadian Mng. Jnl., Nov. 1, p. 750; 2500 w*; 20c.

———. *The Paint Creek Situation; Review from the Operator's Standpoint.*—W. Va. Mng. Asso., Publication; 1912; 6 pp; 2000 w; 50c.

———. *The Southeastern Coal Field;* [The Pembroke-Mendip anticlinal in Kent]. —Coll'y Guardn., June14,1912; p. 1199; 1000 w; 35c.

———. *"The Story of a May Day";* [Trip to Wyoming Valley, Penn., coal mines; describes chiefly Woodward No. 3 and Loomis shafts and surface equipment]. —Mines & Minerals, July,1912; p. 697; 2700 w*; 35c.

———. *The Trend of Anthracite Prices Over Sixty Years.*—Bl. Diam., Nov.23,1912; p. 15; 1500 w*; 20c.

———. *The World's Coal Supplies and Consumption.*—Economist, 1912, p. 110-112; 75c.

———. *Uebersicht über die in den Haupt-Steinkohlenbezirken Preussens,* 1881-1911 *auf* 1 *Arbeiter und auf* 1 *Schicht erzielte Förderung;* [Statistics of output per man per shift in the leading coal fields of Prussia, 1888-1911].—Zts. f. d. Berg-, H-, & Salinenw., Vol. 60, Statistical No. 1; pp. 46-48; 90c.

———. *Ungarns Braun- und Steinkohlenbergbau im Jahre* 1910; [Coal and lignite production and trade of Hungary, 1910].— Zentral Verbd. Bergbau Betriebsl. Oestr., Zts.; July15,1912; p. 423; 1200 w; tables; 45c.

———. *Verbrauch an Brennstoffen verschiedner Art Russlands;* [Construction of fuels in Russia].—Riga Industrie Ztg., May 31, p. 151; 1200 w; 35c.

———. *Versuche und Verbesserungen beim Bergwerksbetriebe in Preussen wärend des Jahres* 1911; [Experiments and improvements in mine working in Prussia in 1911] (continuation).—Bergbau, Nov.28, 1912; p. 676; 1000 w*; 25c.

———. *Visit to Binley Colliery;* [London's nearest coal mine; Warwickshire Mng. Students Asso.]—Sci. & Art. of Mng., Aug.17,1912; p. 12; 800 w*; 35c.

Coal Cutting Machines

See Mechanical Cutters under "Drilling and Boring" (Mine and Mining).

Preparation, Marketing, Storing, Testing, Etc.

Arboledas, J. S. and J. Cabrera y Felipe. —*Alteración lenta y combustión espontánea de los carbones;* [Slow alteration and spontaneous combustion of coal].—Madrid Cientifico, July5,1912; p. 396; 2100 w; 35c.

Babcock, E. J.—*Investigation Relative to the Better Utilization of Non-Coking Low-Grade Lignitic Coals.*—8th Internatnl. Congr. of Appl. Chem'y, Vol. 10, pp. 41-52.

Bailey, E. G.—*Determining Coal Values;* [Chemical and calorific].—Mines & Methods, Nov., p. 191; 1500 w; 35c.

Bartel, —. *Die Verwendung geringwertiung Deutschlands mit elektrischer Energie;* [Use of low-grade fuels, coal, lignite, and peat for producing electric power in Germany; costs per kw.-hour].—E. T. Z., July 11,1912; pp. 705-709*; 50c.

Baum, Bergassessor.—*Die Bergwerksanlange Admiral bei Hörde;* [The Admiral mining plant at Hörde].—Glückauf, Nov. 30,1910; p. 1951; 5000 w*; 50c.

Bement, A.—*Discussion of the B. T. U. Method.*—Coal Age, Nov.16, p. 672; 1000 w*; 20c.

Bement, A.—*Further Notes on Coal Impurities.*—Coal Age, Aug.17, p. 218; 1000 w; 20c.

Bement, A.—*Deterioration of Coal in Storage.*—Power, June25,1912; p. 897; 1000 w; 15c.

Benner, R. C.—*Some Figures on the Smoke Nuisance.*—Coal Age, Nov.23,1912; p. 715; 2000 w; 20c.

Benner R. C.—*The Smoke Problem;* [Evils and notes on Pittsburgh Industrial Research investigation].—Coal Age, Aug.31, 1912; p. 298; 1200 w; 20c.

Bergius, F. R.—*Artificial Production of Coal;* [Read to Internatnl. Congr. of Appl. Chem'y; from cellulose in electric furnace at high pressure; abstract].—Met. & Chemi. Engg., Sept.12,1912; p. 648; 150 w; 35c.

Betts, A. G.—*Utilizing Unmined Coal for the Production of Gas;* [Betts, 1909, U. S. patent for mine-burning of thin or low-grade seams].—Jnl. of Gas. Lightg., No. 2552, 1912; p. 95-96*; 50c.

Binder, O.—*Heizwert Garantie beim Kohlenhandel;* [Calorific guaranty in coal purchasing].—Chemiker Ztg., Aug.6,1912; p. 893; 1800 w; 35c.

Booth, W. H.—*Coal Purchase by Calorific Capacity.*—El. Rev. (London), Aug.9, 1912; p. 206; 1000 w; 35c.

Le Chatelier, H.—*Leçons sur le carbone, la combustion et les lois chimiques;* [Notes on coal and carbon, combustion and chemical laws involved].—Paris, 1911; 456 pp.; 54 figs; $3 (book).

Coste, F. H.—*Fuel Calorimetry.*—Chemi. World, No. 3, 1912; p. 75-7*; 35c.

Cox, A. J.—*Oxidation and Deterioration of Coal.*—8th Internatnl. Congr. of Appl. Chem'y, Vol. 10, pp. 109-128.

Davenport, F. B.—*The New Harleigh Breaker;* [Hazelton, Pa.].—Coal Age, Aug. 24,1912; p. 250-254; 2500 w*; 20c.

Davis, J. D.—*The Fuel Inspection Laboratory of the Bureau of Mines.*—U. S. Bur. Mines, Bull. 41; 1912; pp. 72-92*; 10c.

Delamater, G. R.—*Coal Washing Efficiency.*—8th Internatnl. Congr. of Appl. Chem'y, Vol. 10, pp. 129-137.

Delamater, G. R.—*Washery Plant Control.*—Coal Age, July20,1912; p. 82; 2000 w*; 20c.

Donath, Ed.—*Zur chemischen Charakteristik der Braunkohlen;* [Chemical constituents and characteristics of lignite].—Montanist. Rundschau, June16,1912; p. 585-589; 4000 w; 45c.

Douglas, A.—*Laboratory Testing of Coal.*—Gas World, No. 1472, 1912; p. 415; tables; 35c.

Earnest, D. C.—*Testing Texas Lump Lignite.*—Mines & Minerals, Nov., p. 180; 1000 w; 35c.

Edlund, E. G.—*Ny kollossningskran i Malmö;* [New giant coal-unloading crane at Malmö harbor, Sweden].—Tekn. Tidskr., No. 24, 1912; p. 43-45*; 60c.

Fieldner, A. C., and A. E. Hall.—*Influence of Temperature on the Determination of Volatile Matter in Coal.*—8th Internatnl. Congr. of Appl. Chem'y, Vol. 10, pp. 139-152.

Frazer, J. C. W., and E. J. Hoffman.—*The Constituents of Coal Soluble in Phenol.*—U. S. Bur. Mines, Techn. Paper No. 5; 1912; 20 pp; 10c.

Freise, F.—*Aufbereitung von Erzen und Kohlen;* [The dressing of ores and coal].—Leipzig, 1912; $2 (book).

Garrett, F. C., and R. C. Burton.—*The Use of X-Rays in the Examination of Coal;* [Read to N. of Engl. Inst. of Mng. & Mechl. Engrs.].—Iron & Coal Trades Rev., June 7,1912; p. 925; 2100 w*; 35c.

Gold, K.—*Elektrische Ueberlandzentralen ger Brennstoffe zur einheitlichen Versorg- und ihre Bedeutung für die Verwertung minderwertiger Braunkohlenflöze;* [Long distance electric transmission, and use of low-grade coals; costs of representative plant; read to Allgm. Bergmannstag, Vienna, 1912; abstract].—Montanist. Rundschau, Sept.15,1912; p. 948; 800 w; 50c.

Graham, Chas.—*A Nicola Valley, B. C., Colliery;* [Nicola Valley Coal & Coke Co. mines].—Coal Age, Nov.9, p. 644; 1000 w*; 20c.

Griffith, Wm., and Eli T. Conner.—*Difficulties Overcome in Mining Anthracite Coal.*—Bl. Diam., Nov.9,1912; p. 20; 2000 w*; 15c.

Griffith, Wm., and E. T. Connor.—*Our Anthracite Coal Supply and its Conservation.*—8th Internatnl. Congr. of Appl. Chem'y, Proc., Vol. 24, 1912; pp. 79-113.

Haenig, A.—*Die Steinkohle, ihre Gewinnung und Verwertung;* [Hard coals of Germany, mining, dressing and utilization].—Leipzig, 1912; $1 (book).

Hays, J. W.—*Getting the Fire and the Furnace Right.*—Black Diamond, Sept.28, 1912; p. 20; 2500 w*; 30c.

Hillebrand, W. F., and W. L. Badger.—*Errors in the Determination of Moisture in Coal.*—8th Internatnl. Congr. of Appl. Chem'y, Vol. 10, pp. 187-194.

Hitt, J. E. and Warner, G.—*Inspection of Fuel from the Standpoints of the Producer and of the Consumer.*—Internatnl. Ry. Fuel Asso., Proc.; Vol. 4; 1912; pp. 262-296; 65c.

Holmes, H. N.—*A New Era in the Purchase of Coal;* [Favors fuel value basis].—Coal Age, Sept.28,1912; p. 419; 1800 w; 20c.

Krauss, —. *Die Krafterzeugung in Gaswerken;* [Obtaining the maximum effect from low-grade fuels in gas works; turbogenerators run by waste heat].—Jnl. f. Gasbeleuchtg., Sept.14, pp. 901-905; Sept. 21, pp. 925-932*; 75c.

Lessing, R.—*Laboratory Method for the Comparison of the Coking Properties of Coal;* [Read to Instn. of Gas Engrs.].—Coll'y Guardn., June28,1912; p. 1291; 3200 w*; 35c. Also in Iron & Coal Trades Rev., June28, p. 1034; 3200 w*; 35c.

Lomax, J.—*Microscopical Investigation of Coal and Coal Dust.*—Coll'y Guardn., June21,1912; p. 1240; 1200 w; 35c.

Lucion, R.—*Puissance calorifique dite "inférieure" des combustibles;* [Estimation of calorific value of fuels, with allowance for contained water].—Soc. Chimiq. Belgiq., Bull.; May,1912; p. 255-262; 4000 w; 50c.

Lloyd, T. S.—*The Use of Anthracite Coal for Locomotive Fuel.*—Internatnl. Ry. Fuel Asso.; Proc., Vol. 4, 1912; pp. 66-92*; 65c.

Michenfelder, C.—*Zur Frage der maschinellen Kohlenbewegung in Seehäfen;* [The problem of mechanical handling of coal in harbors].—Fördertechnik, Oct.,1912; p. 217; Nov., p. —; 7000 w*; 75c.

Mueller, F. E.—*Durham Coal & Iron Co.'s Plant at Soddy, Tenn.;* [Washing plant and surface equipment].—Coal Age, Oct.19, p. 528; 1800 w*; 20c.

Napier, J. W.—*Value of Coal on a Coke Basis;* [Coal purchase on basis of value of distillation residues; read to Waverley Asso. of Gas Managers, Edinburgh; abstract].—Iron & Coal Trades Rev., June14,1912; p. 951; 1000 w; 35c.

Newton, L. V.—*The Classification of Coals.*—Mines & Minerals, Oct.; p. 139; 1300 w; 35c.

Nicolardot, P.—*The Influence of the Size of the Grains in the Analysis of Coal.*—8th Internatnl. Congr. of Appl. Chem'y, Vol. 10, pp. 203-206 (in French).

Pfening, H. F.—*The Design of Coal Screens.*—Coal Age, Sept.14,1912; p. 352; 1000 w; 20c.

Phillips, Wm. B. and F. R. Wadleigh.—*Further Notes on Coal Impurities.*—Coal Age, July27,1912; p. 111; 2100 w; 20c.

Pope, G. S.—*Government Coal Purchases Under Specifications, with Analyses for the Fiscal Year* 1909-1910.—U. S. Bur. Mines, Bull. 41; 1912; pp. 1-73; 10c.
Abstract in Practl. El'y, Sept.,1912; p. 701; 3600 w; 35c.

Powers, R. F.—*Economy in Tipple Construction;* [Improved wooden types].—Coal Age, Oct.26, p. 563; 500 w*; 20c.

Pradel, —. *Ein neues Verfahren zur Verfeuerung von Brauhkohlen und Braunkohlenbriketts;* [New Lochner furnace for firing lignite and lignite briquets].—Braunkohle, July5,1912; pp. 209-210*; 45c.

Prost, E. and M. Ubaghs.—*De l'influence des carbonates métalliques pouvant exister dans les houilles sur le résultat du dosage des matières volatiles;* [Effect of metallic carbonates in coal on the estimation of volatile constituents].—Soc. Chemiq. Belgiq., Bull.; May,1912; pp. 216-222; 2000 w; 50c.

Richards, R. H., and C. E. Locke.—*Progress in Ore Dressing and Coal Washing in*

1911.—Mineral Industry, Vol.20,1912; pp. 809-872*.

Roderick, Jas. E.—*Report of Department of Mines of Pennsylvania for* 1911.—Dep. of Mines of Pa., Part 1 (Anthracite), pp* 672; Part 2 (Bituminous), pp* 960.

Rogers, C. M.—*Combustion and Flue Gas Analysis;* [Percentage of CO_2 as related to boiler efficiency].—Power, July2,1912; p. 5; 1600 w; 15c.

Scott, C. E.—*Commercial Sampling of Coal.*—Mines & Minerals, Nov., p. 199; 3000 w; 35c.

Shubart, Benedict.—*The Design of Coal Screens.*—Coal Age, Nov.25,1912; p. 700; 1500 w*; 20c.

Shubart, B.—*Retarding the Flow of Coal on Shaking Screens.*—Coal Age, Oct.5, p. 460; 100 w*; 20c.

Stage, Alf.—*Kul og Kulprodukter;* [Coal and its products; treatise for college students].—Copenhagen, 1912; 16 pp; 50c.

Stansfield, E.—*The Determination of Moisture in Fuels.*—Canada Dept. Mines, Mines Branch, Rep. f. 1911; 1912; pp. 123-137.

Taylor, E. C.—*Problems in the Washing of Coal.*—Coal Age, Oct.26, p. 570; 2100 w*; 20c.

Tench, S. V.—*Preparation of Anthracite Coal;* [Read to Panther Valley Mng. Inst.].—Coal Age, Nov.16, p. 681; 2100 w; 20c.

Thompson, C. H.—*Coal Dust and Coal Loading Machines;* [Discusses their necessity for economic handling of coal].—Mines & Minerals, Aug.,1912; p. 11; 750 w; 35c.

Uehling, E. A.—*Combustion of Coal;* [Read to Ohio Soc. of Mechl. Engrs., May, 1912].—Power, July9,1912; p. 42; 1000 w; 15c. Also in Practl. Engr., Aug.1.1912; p. 763; 2700 w; 25c.

Wadleigh, F. R.—*Notes on the Impurities in Coal.*—Coal Age, June22,1912; p. 1206; 4500 w; 20c.

Wahl, A.—*Des constituants de la houille;* [Some constituents of coals; read to Acad. d. Sci., Paris; abstract].—Echo d. Mines, June13,1912; p. 696; 600 w; 35c.

Weisser, F.—*Aschenbestimmung in Steinkohlen;* [Ash estimation in coal].—Chemiker Ztg., July4,1912; p. 757; 3200 w; 35c.

Wilson, E. B.—*The Clinkering of Coal Ash.*—Mines & Minerals, Oct.,1912; p. 125; 1000 w; 35c.

Wilson, H. M.—*Coal Washing and Pollution of Streams.*—Sanitary Record, Vol. 50, 1912; p. 131; 50c.

Williams, A. D.—*Gantry Coal Handling Crane;* [100-tons hourly capacity].—Power, Nov.12, p. 703, 800 w*; 15c.

G. D. C.—*Shortcomings of the B. T. U. System.*—Coal & Coke Op., Oct.10, p. 225; 2100 w; 25c.

"Brychan."—*Washing and Sorting Small Coal in Wales.*—Sci. & Art of Mng., Aug.31, 1912; p. 32; Sept.14, p. 54; 2000 w*; 50c.

"Carbonartis."—*Coal; Its Constitution, Varieties, Origin and Uses.*—Sci. & Art of Mng., Aug.31,1912; p. 27; Sept.14, p. 52; Sept.28, p. —; 5000 w; 60c.

W. H. Jackson & Co.—*The Port of Grimsby and Immingham Annual.*—Grimsby, 1912; $2 (book).

Fr. Z.—*Gedeckte Kohlenlager mit Greiferbetrieb;* [Construction and power-shovel operation of covered coal-storage piles in Frankfurt].—Kali Erz & Kohle, June25, 1912; p. 629; 750 w; 35c.

"Traveler."—*Arranging a Coal Storage Yard to Suit a Locomotive Crane;* [O. S. Richardson plant, Chicago].—Black Diamond, Aug.31,1912; p. 18; 2000 w*; 30c.

"Traveler".—*A Pocket Which Pays for Itself in 8 Years;* [Coal pockets of O. S. Godfrey & Co., Milton, Mass.].—Black Diamond, June29,1912; p. 17; 1500 w*; 30c.

———. *A Fleet of 10-Ton Coal Trucks.*—Power Wagon, No. 91, 1912; pp. 17-22*; 50c.

———. *Advantages in the Use of Fine Coal.*—Black Diamond, Oct.5,1912; p. 28; 3500 w*; 30c.

———. *A Low-Delivery Coal Chute;* [To diminish breakage in loading railroad cars].—Coal Age, Aug.10,1912; p. 181; 500 w*; 20c.

———. *A New Mining Machine;* [Hoadley-Knight machine to simultaneously mine and granulate the coal face].—Coal Age, July13,1912; p. 49; 1000 w*; 20c.

———. *A Rapid Coal Handling Plant at Toledo;* [Gantry crane of Toledo Railway & Light Co.].—Black Diamond, June29, 1912; p. 21; 750 w*; 30c.

———. *Briquette Plant for the Italian Navy;* [Johnson & Sons, Ltd., eggette plant].—Coll'y Guardn., May24,1912; p. 1033; 1000 w*; 30c.

———. *Calorific Value of Coal.*—Coal Age, Oct.12, p. 501; 1000 w; 20c.

———. *Cardiff Docks Sacrifice Speed to Get Exact Sizing;* [Handling methods at Cardiff, Wales].—Black Diamond, Aug.24, 1912; p. 18; 2400 w*; 30c.

———. *Coal Analysis.*—Jnl. of Gas Lightg, 1912, No. 2563; pp. 977-982*; 50c.

———. *Coal Handling Plant at the Wigan Electricity Works;* [Bennis overhead crane-trolley, automatic weigher, and U-link conveyor].—El. Rev. (London), Sept.27, 1912; p. 501; 600 w*; 35c.

———. *Coaling Ships Without Breakage.*—Coal Age, Sept.7,1912; p. 316; 600 w*; 20c.

———. *Coal-Washing and Screening Plant at Abergorky Colliery, S. Wales.*—Iron & Coal Trades Rev., Nov.8, p. 756; 1000 w*; 35c.

———. *Coal Washing and Briquetting; Hibernia Mine No. 2, Germany.*—Mines & Minerals, Nov., p. 193; 1800 w*; 35c.

———. *Combustion of Bunker Coal and Coal Cargoes;* [Investigation by Lloyds].—Engnrg., July12,1912; p. 54; 1200 w; 35c. Also in Coll'y Guardn., July26, p. 175; 1000 w; 35c.

———. *Concrete and Steel Coal Washery* [Panama, Ill.].—Engg. Record, Oct.26, p. 465; 1200 w*; 20c.

———. *Developments at Cortonwood Colliery;* [Chiefly notes on coking plant and Humboldt coal-washing equipment].—Iron & Coal Trades Rev., May24,1912; p. 833; 1000 w*; 35c.

———. *Die Gründe der Kohlenproduktion für die Ablehnung zahlenmässiger Heizwertgarantien im Kohlenhändel;* [The producers' reasons in opposition to the proposed purchase of coal under calorific guarantee; discussion before the Zentral Verbd. Kohlenhändler Deutschlands, May, 1911, in Heidelberg].—Hamburg, 1912; 14 pp; $1 (pamphlet).

———. *"Dortmund" Washery at the Holbrook Colliery.*—Iron & Coal Trades Rev., July5,1912; p. 1; 2000 w*; Supplement plate; 35c.

———. *Dry Cleaning of Coal at a Franklin County Mine;* [Spiral separators

at Wilmington Star Mng. Co. screening plant, Illinois].—Black Diamond, Aug.3, 1912; p. 18; 8000 w*; 35c.

———. *England Builds a Dock to Handle Export Coal;* [Describes Immingham docks of Gt. Central Ry.].—Black Diamond, July 20,1912; p. 15; 3200 w*; 25c.

———. *European Bunkering Methods;* [Crane-elevator loaders on colliers].—Coal Age, Sept.14,1912; p. 355; 2100 w*; 20c.

———. *Fueling Ocean-Going Vessels;* [Combined lighter and crane hoist of Rapid Coaling & Transfer Co. of Baltimore].—Black Diamond, Oct.5,1912; p. 25; 1200 w*; 35c.

———. *German Picking Table in America.*—Bl. Diam., Dec.7,1912; p. 19; 750 w*; 30c.

———. *Lake Docks May Determine Success at Panama;* [Coal handling methods at Lake docks].—Black Diamond, Oct.12, p. 18; 2400 w*; 30c.

———. *Mixing, Hoisting and Charging Equipment for Handling Coal and Minerals.*—Eng. Rec., Dec.7,1912; p. 646; 3000 w*; 20c.

———. *Miscellaneous Analyses of Coal Samples from Various Fields of the U. S.;* [Ala., Cal., Colo., Kans., Ky., Mo., Mont., N. Dak., Okla., Oreg., Pa., S. Dak., Tenn., Utah, Va., Wash., W. Va. Wyo.].—U. S. Geol. Surv., Bull. 471-J; 1912; 29 pp; 10c.

———. *New Bankhead at Albion Mines, Stellarton, N. S.*—Canadian Mng. Jnl., Sept. 15,1912; p. 650; 2700 w*; 35c.

———. *New British Coal Washing Plant;* [Pulsating jig washer at Lamb colliery, Northumberland].—Coal Age, Aug. 10,1912; p. 185; 1000 w*; 20c.

———. *New Coal Transportation Plant;* [Suspension railway for municipal electric plant near Spree river, Charlottenburg].—Coal Age, Sept.14,1912; p. 359; 1000 w*; 20c.

———. *New Screening Plants at Church Gresley Colliery;* ["Etna" oscillating screens].—Iron & Coal Trades Rev., Nov.1, p. 710; 1600 w*; 35c.

———. *Overwind Prevention in England.*—Coal Age, Nov.23, 1912; p. 711; 2000 w*; 20c.

———. *Phenol as a Coal Solvent.*—Coal Age, Aug.3,1912; p. 157; 1400 w; 20c.

———. *Preparation of Anthracite Coal;* [Roll crushing].—Coal Age, Aug.31,1912; p. 299; 600 w; 20c.

———. *Recent Developments in Coal Breaking;* [Primus jaw crusher].—Iron & Coal Trades Rev., July19,1912; p. 90; 1000 w*; 35c.

———. *Reclaiming Anthracite Coal from Rivers;* [Reworking outwashed coals in rivers below old culm piles and collieries].—Black Diamond, Sept.7,1912; p. 20; 2000 w*; 30c.

———. *Relation of Docks to the Varied Uses for Coal;* [Speed handling on Lake docks; slower but careful handling on Coast docks.—Black Diamond, Oct.5,1912; p. 47; 2400 w; 30c.

———. *Rock Island Dealers Build a Joint Coal Pocket;* [Single, sectional, gravity bin].—Black Diamond, Sept.14,1912; p. 18; 2500 w*; 30c.

———. *Sizing and Sorting Coal in England.*—Coal Age, Nov.23,1912; p. 712; 1000 w*; 20c.

———. *Telpher Coal Transporter Plant at the Frankfort Municipal Electrical Works.*—Engg. Rev., Oct.15, p. 142; 1600 w*; 35c.

———. *The B. & O. R. R., America's First Coal Carrier;* [Describes past and present railroad and bay terminal facilities].—Black Diamond, Oct.5,1912; p. 32; p. 66; 1500 w*; 30c.

———. *The Blyth, Engl., Coal-Loading Harbor.*—Coal Age, Sept.14,1912; p. 364; 1000 w*; 20c.

———. *The Caledonia Tipple;* [Sullivan county, Indiana].—Coal Age, Aug.3,1912; p. 156; 800 w*; 20c.

———. *The World's Largest Bunkering Port;* [Methods and conditions at Cardiff, Wales].—Coal Age, Aug.3,1912; p. 147; 1200 w*; 20c.

———. *The Weathering of Coal;* [Submerged storage preserves heat value of steam coals].—Coal Age, Aug.31,1912; p. 287; 1200 w; 20c.

———. *Ueber Verwendung roher lignitischer Braunkohle zur Herstellung von Generator-gas;* [Use of low-grade, woody, raw lignite in gas producers at the Misburg iron foundries, Hannover].—Stein & Braunkohle, July15,1912; p. 163; 1000 w*; 35c.

———. *Ueber die Zersetzung von aufgestapelter Kohle;* [Decomposition of coal in storage and upon exposure].—Kali Erz & Kohle, Oct.25, p. 1072; 1000 w; 35c.

———. *Verwittenung und Gasgehalt von Steinkohlen;* [Weathering and gas content of coal; problems in storage].—Ton-Industrie Ztg., July6,1912; p. 1085; 1000 w; 30c.

———. *Washing, Coking and By-Product Recovery Plant at the Silkstone Collieries.*—Iron & Coal Trades Rev., Oct.25, p. 661; 2800 w*; 35c.

———. *Westphalian Coal Screening and Washing Plant;* [Rheinpreussen colliery].—Iron & Coal Trades Rev., Sept.27,1912; p. 463; 700 w; 35c.

Fuel Briquetting

See Briquetting under "Waste Disposition."

Shipping Electricity from Coal Mines

See Electricity.

Nationalization of Coal Mines

See Government Ownership and Nationalization under "Law; Legislation; Taxation."

Economics of Coal Industry.

Baselga, S., and others.—*La industria carbonera nacional;* [Protection for the coal mining industry of Spain; report of commission to the ministry].—Rev. Minera, June8,1912; p. 273; 3000 w; 35c.

Berger, L.—*Internationaler Kohlen Wettbewerb;* [International coal competition; based on Greenwood's article read before Canadian Mng. Inst.].—Techn. Blätter, Aug.10,1912; p. 249; 3000 w; 35c.

Bogle, W. L.—*"The Poor Old Coal Trade";* [Diagnoses economic afflictions, and suggests remedies].—Coal & Coke Op., June 20,1912; p. 389; 2100 w*; 25c.

Brooks, A. H.—*Geography in the Development of the Alaska Coal Deposits;* [Discusses dominant position of Alaska coals to supply Pacific coast markets, especially in America].—Asso. of Amer. Geographers, Annals; Vol. 1, 1912; pp. 85-94.

Burrows, J. S.—*American Coals Which are Suitable for Export.*—Black Diamond, Oct.5,1912; p. 23; 2400 w; 30c.

Carlow, —. *Some Outstanding Reasons for Increase in the Price of Coal;* [Read to British Asso. of Mng. El. Engrs.].—Iron & Coal Trades Rev., Oct.18, p. 628; 2000 w; 35c.

Chance, H. M.—*Appraisement of Michigan Coal Lands.*—Coal Age, July6,1912; p. 13; July13, p. 51; 5000 w; 30c.

Conner, E. T.—*Anthracite Waste.*—Coal Age, Oct.19, p. 541, 546; 1500 w; 20c.

Conner, E. T.—*The So-Called Coal Sales Contract.*—Coal Age, Nov.9, p. 634; 1000 w; 20c.

Creen, J.—*The Fake Promoter in Coal Mining.*—Coal Age, Aug.24,1912; p. 255; 1300 w; 20c.

Dale, H. B.—*Coal and the London Coal Trade.*—London; 1912; (pamphlet).

Good, T.—*The Coal Strike; Its Causes and Consequences;* [British].—Cassier's Mag., June,1912; pp. 533-539; 35c.

Fisher, W. L.—*Government Policy and Coal Lands;* [Reply to Congressman Mondell on alleged over-valuation of public coal lands, especially in Wyoming].—M. & S. P., Aug.31,1912; p. 271; 1800 w; 20c.

Harrison, S. M.—*Nine Years of the Anthracite Conciliation Board.*—Surveyor, 1912; No. 3, pp. 143-15; 75c.

Ilgner, C.—*Die Machinenwirtschaft der Kohlengruben;* [The industrial economy of machinery in coal mining].—Montanist. Rundschau, Sept.15,1912; p. 939; 2100 w; 45c.

Jüngst, E.—*Die Steinkohlenausfuhr Deutschlands und ihre Bebeutung für die verschiedenen Bergbaureviere;* [Coal export trade of Germany, and its significance to the various mining districts of Germany].—Glückauf, June15,1912; p. 955-962; 50c.

Owens, W. D.—*The Increased Cost of Mining Anthracite.*—Mines & Minerals, Aug.1912; p. 26; 1600 w; 35c. Also in Coal Trade Bull., Aug.15, p. 35; 1600 w; 25c.

Pohlman, A.—*Kohlenfiskus und Kohlensyndikat;* [The problem of the government, the state coal mines, and the Rhenish coal syndicate].—Bodenreform, 1912; No. 4; pp. 94-101.

Polster, O.—*Festschrift zum 10 Jahr Bestehen des Centralverbandes der Kohlenhändler Deutschlands;* [10-year memorial volume of Central Union of Coal Dealers of Germany, describing organization and activities].—Hamburg, 1912; 46 pp; $1 (book).

Read, E. H.—*Distribution of Anthracite Coal;* [Methods of ordering and delivering anthracite shipments.].—Retail Coalman, Aug., 1912; p. 46; 2500 w; 25c.

Richardson, T., and J. A. Walbank.—*Profits and Wages in the British Coal Trade, 1898 to 1910.*—London, 1912; 96 pp.; 75c; (book).

Seidl, —. *Kohlenpreise und Förderkosten;* [Coal prices and cost of production; researches into the doubling of coal prices in Germany, 1880-1909].—Techn. Wirtschaftl. Zentralbl., No. 1, 1912; pp. 47-58; 3 tables; 75c.

Stromeyer, C. E.—*Oil Fuel and Boiler Corrosion;* [Relative economies of oil engines, oil fuel and coal-fired steam engines; report of Manchester Steam Users' Asso.].—Iron & Coal Trades Rev., Nov.1, p. 706; 1100 w; 35c. Also in Electrician, Nov.1, p. 133; 4000 w; 35c. Also in Coll'y Guardn., Nov.8, p. 942; 2000 w; 35c.

Totten, R. J and others.—*European Coal Prices and Trade;* [Austria, Denmark, France, Germany, Netherlands, Norway, Russia, Sweden, Spain, Switzerland, Turkey; also Uruguay].—U. S. Consul. Rep., July6,1912; p. 81-95; 20c.

Wiedenfeld, K.—*Das Rheinisch-Westfälische Kohlensyndikat;* [The Rhine-Westphalian coal syndicate; its organization and methods].—Bonn, 1912; 172 pp; atlas of 5 plates; $3 (book).

Wright, H. C.—*Co-operative Coal Purchasing.*—El. Rev. (London), Aug.30,1912; p. 327; 500 w; 35c.

Zern, E. N.—*Will the Use of Coal Decline?* [Competition of Diesel and combustion engines].—Coal Age, Aug.24,1912; p. 246; 1000 w; 20c.

———. *Angriffe der Sozialdemokratischen Presse auf den Kohlenbergbau;* [Attacks of the social democratic press in Germany on the coal mining industry].—Deu. Bergwerks Ztg., July19,1912; p. 1; 1600 w; 35c.

———. *Coal Prices in Germany;* [Schedules of Westphalian syndicate for 1912-1914].—Iron & Coal Trades Rev., Oct.25, p. 673; 500 w; tables; 35c.

———. *Colliery Profits and Prospects;* [British; editorial review].—Iron & Coal Trades Rev., Sept.27,1912; p. 468; 1600 w; 35c.

———. *Der preussische Bergfiskus und das Rheinisch-Westfälische Kohlensyndikat;* [Relations between the Prussian state mines and the Rhine-Westphalian coal syndicate].—Handel & Industrie, Feb.10,1912; p. 147-148; 75c.

———. *Der Stand der Erneuerungsfrage des Kohlensyndikates;* [Status of the question of renewal of the Rhine-Westphalian coal syndicate].—Internatnl. Volkswirt, No. 2, 1912; pp. 17-18; 75c.

———. *Die Rheinschiffahrt; Ihre Bedeutung für den Kohlenhandel;* [Water transportation on the Rhine and its importance in the development of the west German coal trade].—Deu. Kohlen Ztg., 1912, No. 6; p. 59-61; 72-74; 75c.

———. *Proyecto de sindicacion de las empresas carboneras españolas;* [The projected syndication of the coal industry of Spain].—Rev. Minera, July16,1912; p. 337; 1500 w; 35c.

———. *Some Economic Aspects of the Minimum Wage Awards;* [Editorial discussion].—Iron & Coal Trades Rev., July26, 1912; p. 134; 2000 w; 35c.

———. *Storing Fine Coal to Equalize the Distribution;* [Suggested manipulation of stored stocks to equalize prices].—Black Diamond, July27,1912; p. 15; 4000 w; 30c.

———. *The Minimum Wage and the Small Colliery;* [Discusses failures].—Coll'y Guardn., July5,1912; p. 27; 2000 w; 35c.

———. *The Other Side of the Price Controversy;* [Discusses rise in anthracite prices quoting extracts from popular press opposing the rise].—Coal Age, June22,1912; p. 1219; 1800 w; 20c.

———. *What "Anthracite Trust" Leader Makes Out of It;* [Reading Co. small profits].—Black Diamond, Nov.16, p. 15; 3000 w; 30c.

———. *Why a Conquest of the Export Market is Possible;* [Conditions in central Appalachians, Britain and abroad favoring American producers].—Black Diamond, June29,1912; p. 15; p. 30; 3500 w*; 30c.

Wages, Strikes, Unions, etc.

See under Labor (Mine and Mining).

Mechanical Cutters

Bolesta-Malewski, —. *Abbau mit hohem Stoss unter Verwendung von Abbauförderungeinrichtungen;* [Machine mining of thin coal seams using face conveyors; Ruhr district, German].—Glückauf, Oct.26, pp. 1749-1758*; Nov.2, pp. 1789-1796*; 75c.

Malcomson, Charles T.—*Briquetting Fine Coal at the Head of the Lakes.*—Bl. Diam., Nov.23,1912; p. 18; 3000 w*; 20c.

McIntyre, Wm., Jr.—*Battle Creek Coal Mine, Tennessee.*—M. & M., Dec.,1912; p. 237; 3000 w*; 35c.

Parker, E. W.—*The Production of Coal in* 1911; [Includes notes on machine mining].—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 207 pp.; 20c.

COKE AND COKING

Andrews, C. W.—*By-Product Coke Industry in U. S.;* [read to Amer. Inst. Mng. Engrs.; abstract].—Iron Age, Nov.14, p. 1163; 800 w; 30c.

Atwill, F. C.—*By-Product Coke as a Domestic Fuel.*—Coal & Coke Op., Sept.19, 1912; p. 177; 1200 w; 25c.

Atwill, F. C.—*How to Burn Coke to Get the Best Home Results.*—Black Diamond, Aug.24,1912; p. 16; 1600 w; 30c.

Babcock, E. J.—*Investigation Relative to the Better Utilization of Non-Coking Low-Grade Lignitic Coals.*—8th Internatnl. Congr. of Appl. Chem'y, Vol. 10, pp. 41-52.

Bacon, C. J.—*Methods of Coke Dust Disposal;* [Yearly disposal of 50,000 tons of dust, and accumulation of 100,000 tons from by-product ovens].—Amer. Gas. Jnl., Vol. 96, 1912; pp. 376-7; 380-4*; 65c.

Bagley, D. C.—*Benzolgewinnung aus dem Koksofengas;* [Benzol recovery from coke oven gas].—Kohle & Erz, Oct.14, p. 1050; 3200 w*; 35c.

Blauvelt, Wm. H.—*The Manufacture of By-Product Coke.*—Amer. Inst. Mng. Engrs., Bull. 71; Nov.,1912; pp. 1299-1314*; $1.15. Abstract in Iron Age, Nov.14, p. 1161; 3500 w*; 30c.

Belden, A. W.—*The Bee-Hive Coke-Oven Industry in the U. S.*—8th. Internatnl. Congr. of Appl. Chem'y, Vol. 10, pp. 53-62.

Bell, J. F.—*The Development of the Sale of Coke;* [Read to British Commercial Gas Asso.].—Iron & Coal Trades Rev., Oct.18, p. 637; 1500 w; 35c.

Blair, A. A. and others.—*Committee Report on Standard Methods for Determining the Constituents of Foundry Coke.*—Amer. Foundrym. Asso., Proc., Sept.,1911; pp. 143-146; 1200 w; 65c.

Blauvelt, W. S.—*Coke Manufacturing and its Probable Future Importance;* [Probable substitution for raw coal as domestic fuel; read to Mich.-Ohio-Indiana Coal Asso., June,1912].—Coal & Coke Op., June27,1912; p. 412; 1600 w; 25c.

Campbell, J. R.—*Neutral Coke.*—8th Internatnl. Congr. of Appl. Chem'y, Vol. 10, pp. 73-89.

Finze, —. *Die Entwickelung der Koksdarstellung auf den Steinkohlenbergwerken in der Grafschaft Schaumburg;* [History of 100 years' development of coke-making at the hard-coal mines of the Schaumburg district, Prussia].—Zts. f. d. Berg-, H.-, & Salinenw., Vol. 60, No. 2; 1912; pp. 185-207*; 90c.

Fürth, —. *Leuchtgas, Kokerei und Generatorgas in Jahre* 1911; [Developments in technology of illuminating gas, coking, and producer gas in 1911].—Zts. f. angew. Chemie, June28,1912; p. —; July5, pp. 1362-1371*; July 12, pp. 1415-1422; 90c.

Gillon, R.—*Note sur la mise en service et l'arret des fours à coke à récupération des sous-produits;* [Notes on the starting and stopping of by-product coke ovens].—Rev. Univ. d. Mines, July,1912; p. 106-116; 95c.

Gobiet, A.—*Neuerungen der Kokereiindustrie;* [Innovations in the coke industry; 1: coke ovens].—Montanist. Rundschau, Sept. 16,1912; p. 932; Oct. 1; 5000 w*; 75c.

Gobiet, A.—*Gurtförderer zum Transport von Koks;* [Band conveyors in the handling of coke].—Montanist. Rundschau, July1, 1912; p. 636; 1000 w*; 45c.

Gobiet, A.—*Eine neuartige Fördervorrichtung für Ammoniumsulfat;* [Tubular conveyor for ammonium sulphate at the Karolinen coke plant, Austria].—Montanist. Rundschau, Aug.16,1912; p. 793; 1600 w*; 45c.

Greaves, R. H.—*Coking Practice in the South Wales District.*—Mechl. Engr., Vol. 30, 1912; pp. 265-268*; 50c.

Hall, R. D.—*By-Product Ovens, Johnstown, Pa.*—Coal Age, July20,1912; p. 72; 4500 w*; 20c.

Hartman, Wm. E.—*By-Product Coke Ovens in the United States;* [Costs, qualities of product; improvements; status of bee-hive operators; open discussion before Engrs. Soc. of W. Penn.].—Iron Age, July 11,1912; p. 85; 10,000 w; 30c. Also in Coal Trade Bull., July15, p. 43; 4000 w; 25c. Also in Coal & Coke Op., May30, p. 346; 2500 w; 25c.

Hultmann, G. H.—*Hvieket koksugnssystem ar lampligast for framstallande i Sverige af prima masugnskoks;* [Which system of oven is best adapted for making prime blast-furnace coke in Sweden?].—Vermlands. Bergm. För., Annaler f. 1911, p. 31-51*; 90c.

Jenkner, —. *Ueber die Prüfung des Kokerei Rohgases auf seinen Gehalt an Nebenerzeugnissen;* [Testing crude coke-oven gas for its content of by-products].—Stahl & Eisen, July11,1912; pp. 1129-1133*; 75c.

Lecoq, E.—*Considérations générales sur l'industrie des fours à coke à régénération de chaleur;* [Some general remarks on heat-regenerative coke ovens].—Rev. de Métallurgie, Sept.,1912; pp. 681-699*; $1.15.

Lessing, R.—*A New Coking Test for Fuels.*—8th Internatnl. Congr. of Appl. Chem'y, 1912; Vol. 10, pp. 195-198.

Lessing, R.—*Laboratory Method for the Comparison of the Coking Properties of Coal;* [Read to Instn. of Gas Engrs].—Coll'y Guardn., June28,1912; p. 1291; 3200 w*; 35c. Also in Iron & Coal Trades Rev., June28, p. 1034; 3200 w*; 35c.

Lucas, F. E.—*By-Product Coke Manufacture at Sydney, N. S.*—Canadian Mng. Jnl., Sept.15,1912; p. 641; 2000 w*; 35c.

Lucas, E. F.—*The Manufacture of By-Product Coke.*—Amer. Inst. Mng. Engrs., Bull. 71, Nov.,1912; pp. 1315-1326; $1.15. Abstract in Iron Age, Nov.14, p. 1163; 2700 w*; 30c.

Abstract in Coal & Coke Op., Nov.28, 1912; p. 337; 5000 w; 20c.

Lux, —. *Koksherstellung und Hochofenbetrieb im innern Chinas;* [The first coke plant and blast furnace in interior China].—Stahl & Eisen, Aug.22,1912; pp. 1404-1407*; 75c.

Napier, J. W.—*Value of Coal on a Coke Basis;* [Coal purchase on basis of value of distillation residues; read to Waverley Asso. of Gas Managers, Edinburgh; abstract].—Iron & Coal Trades Rev., June14,1912; p. 951; 100 w; 35c.

Nübling, —. *Der Einfluss der mittelbaren Betriebskosten auf die Wirtschaftlichkeit der Retortenöfen;* [Influence of average costs on the industrial efficiency of the horizontal and vertical retort].—Jnl. f. Gasbeleuchtg., May25,1912; pp. 490-494; 50c.

Parker, E. W.—*Coke Output of the U. S.,* 1911; [Summary of U. S. Geol. Survey report].—Coal Trade Bull., Aug.1,1912; p. 32; 500 w; 25c.

Parker, Edw. W.—*The Manufacture of Coke in* 1911; [Penn., Ala., W. Va., Ill., Colo., N. Mex.; also Ga., Kent'y, N. Y., Ohio, Tenn., Utah, Va., Wash., Ind., Kans., Md., Mass., Mich., Minn., Mont., N. J., Okla., Wis.].—U. S. Geol. Survey, Mineral Resources for 1911; 1912; 61 pp.; 10c.

Parr, S. W. and H. L. Olin.—*The Coking of Coals at Low Temperatures, with a Preliminary Study of the By-Products.*—Univ. of Illinois, Engg. Experim. Station, Bull. No. 60; 1912; 46 pp.*; 35c.

Rath, —. *Mischrohraufsätze aus Graphit für Unterbrenner Koksöfen;* [Use of graphite air-mixing feed pipes in underfeed coke ovens].—Glückauf, Aug.17,1912; p. 1338; 500 w*; 50c.

Reubold, —. *Machinelle Kokslöscheinrichtungen für Kokereibetriebe;* [Mechanical coke quenchers].—Stahl & Eisen, Oct. 24, pp. 1784-1788*; 75c.

Reynolds, S.—*Waste Heat Coke Ovens at Marianna, Pa.*—Mines & Minerals, Oct., 1912; p. 135; 1000 w*; 35c.

Schnablegger, —. *Torf, Braunkohlen, Sägespäne, und Holzkohlenverkokung;* [New process of coking and gasification of peat, lignite, sawdust and charcoal].—Oestr. Ungar. Montan & Metall-Ind. Ztg., Aug.11, 1912; p. 9; 1000 w; 35c.

Thau, A.—*Selbsttätige Betriebsüberwachung auf Teerkokereien mit besonderer Berücksichtigung der Gasabsaugung;* [Automatic indicating devices at coke tar plants, with special reference to gas metering].—Glückauf, Oct.19, pp. 1706-1719*; Oct.26, p. 1758-1764*; Nov.2, pp. —*; 95c.

Truesdale, F. P.—*The Connellsville Coke Region; Its Past, Present and Future;* [Read to Asso. of Freight Traffic Officers, Penna. R. R. Co.].—Coal Trade Bull., Nov. 15, p. 56; 2000 w; 25c.

Wilson, E. B.—*The Muller By-Product Coke Oven;* [Read to Coal Mng. Inst. of America].—Mines & Minerals, Aug.,1912; p. 12; 2500 w*; 35c.

———. *A New Direct By-Product Process;* [Simon-Carves system].—Coal Age, July20,1912; p. 77; 2000 w; 20c.

———. *Atmospheric Nitrogen by the Aid of Coke Oven Gases;* [Häusser process].—Compr. Air Mag., Aug.1912; p. 6517; 2500 w*; 25c.

———. *Centenary of the London Gas Light & Coke Co.*—Engnrg., June28,1912; p. 879; 800 w; 35c.

———. *Coke-Oven By-Products in* 1911; [Abstract of British official report under Alkali Works Acts].—Coll'y Guardn., Aug. 2,1912; p. 219; 4000 w; 35c.

———. *Coke Quenching and Loading Devices.*—Coal Age, Aug.3,1912; p. 146; 1200 w; 20c.

———. *Connellsville Coke Prices for* 13 *Years;* [Monthly average prices, 1900-1912].—Iron Age, Aug.29,1912; p. 465; 600 w; tables; 30c.

———. *Connellsville Coke Production, First Six Months of* 1911.—Coal Trade Bull., Aug.1,1912; p. 34; 300 w; table; 25c.

———. *Developments at Cortonwood Colliery;* [Chiefly notes on coking plant and Humboldt coal-washing equipment].—Iron & Coal Trades Rev., May24,1912; p. 833; 1000 w*; 35c.

———. *Die Kokserzeugung der deutschen Gaswerke;* [Coke and by-product recovery from German gas works, 1905-1912].—Glückauf, July27,1912; p. 1217; 600 w; tables; 45c.

———. *Electric Smelting in Norway;* [Abstract of article in Teknisk Ukeblad].—Mg. Jnl., Nov.23,1912; p. 1145; 35c.

———. *Four à coke horizontal avec récupération, système Bauer;* [Bauer horizontal by-product coke oven].—Rev. Noire, Aug.4,1912; p. 363; 1000 w*; 35c.

———. *Illuminating Gas from Coke Ovens in Germany;* [Output compared with colliery gas works, 1903-1910].—Iron & Coal Trades Rev., June21, p. 998; 500 w; 35c.

———. *Important British Collieries;* [Cortonwood surface plant and mining, Wombwell; coke ovens and by-product plant].—Coal Merchant & Shipper, No. 610, 1912; p. 513-4*; 50c.

———. *Improved Coke Oven Practice;* [Use of crushed coal, electric pullers and loaders and levellers].—Mines & Minerals, July,1912; p. 720; 1000 w*; 35c.

———. *Increase in By-Product Coking;* [Statistical review in U. S., 1893-1911].—Iron Trade Rev., July11,1912; p. 82; 1000 w; table; 20c.

———. *Past and Future of the Connellsville Coke Region.* (Address delivered to the Freight Track Officers of the Pennsylvania R. R.).—Coal & Coke Op., Nov. 21,1912; p. 321; 2200 w; 20c.

———. *Progress in By-Product Coke Manufacture;* [Symposium before Amer. Inst. Mng. Engrs.; abstract].—Iron Age, Nov.14, pp. 1161-1165; 30c.

———. *The Coppée Coke-Ovens and By-Product Plants.*—Coll'y Guardn., Aug.23, 1912; p. 388; 600 w; 35c.

———. *Washing, Coking and By-Product Recovery Plant at the Silkstone Collieries.*—Iron & Coal Trades Rev., Oct.25, p. 661; 2800 w*; 35c.

———. *Water and Moisture Absorption by Coke.*—Coal Age, July20, 1912; p. 79; 500 w; table; 20c.

GAS PRODUCERS, PRODUCER GAS

Benefiel, J. O.—*Tar Troubles with Producer Gas.*—Power, Aug.6,1912; p. 191; 500 w*; 15c.

Chapman, W. B.—*Chapman Rotary Gas Producer.*—Rock Products, Oct.22, p. 47; 1200 w*; 30c.

Cortelyou, G. B.—*Commercial and Financial Aspects of the Gas Industry.*—pp. 67-96.

Dreyfus, E. D.—*Commercial Value of the Illuminating-Gas Engine.*—Cassier's Mag., Aug.,1912; p. 128; 2700 w*; 35c.

Fernald, R. H.—*The Status of the Gas Producer and of the Internal-Combustion Engine in the Utilization of Fuels.*—U. S.

Bur. Mines, Techn. Paper No. 9; 1912; 42 pp; 10c.

Forstall, A. E.—*The Technique of Gas Manufacture.*—pp. 97-125*.

Garland, C. M.—*Bituminous Gas Producers for Power.*—Amer. Soc. Mechl. Engrs., Proc.; June.1912: 20 pp.; 95c.

Goodenough, F. W.—*High Pressure Gas Lighting in Gt. Britain.*—Illuminatg. Engg. Soc., Proc., Sept.,1912; 12 pp; 50c.

Goodnow, G. F.—*Some Observations Regarding Gas Ovens in Europe and America;* [Read to Illinois Gas Asso., 1912].—Cheml. Engr., July, p. 20; 3000 w; 35c.

Gwesdz, J.—*Gaserzeuger für Vergasung flüssiger Brennstoffe;* [Gas producer types for gasification of liquid fuels].—Braunkohle, Sept.6, pp. 357-366*; 50c.

Gwosdz, J.—*Gasfeuerungen und Kraftgasanlagen mit chemischer Regenierung von Verbrennungsgasen;* [Gas firing and gas-power plants, with chemical regeneration of the burned gases].—Glückauf, Junel, 1912; p. 866-870*; 50c.

Gwosdz, J.—*Sauggaserzeuger für Steinkohle;* [Körting and M. Hille underfeed suction gas-producers for hard coals].—Gasmotoren Technik, June,1912; July, pp. 57-60*; 75c.

Haanel, B. F.—*The Peat Producer-Gas Power Plant at the Government Fuel-Testing Station, Ottawa, Canada.*—Amer. Peat Soc., Jnl.; No. 2, 1912; p. 84; 2200 w*; $1.35.

Haanel, E. F.—*Use of Peat in Gas Producers;* [in Canada; read to Internatnl. Congr. of Appl. Chem'y; abstract].—Engg. Record, Oct.5, p. 373; 600 w; 20c.

Hammond, E. K.—*The Work of a Municipal Gas Testing Station.*—Cheml. Engr., Aug.1912; p. 45; Sept, p. —; 600 w*; 50c.

Hastings, C. W.—*The Directory of Gas Undertakings,* 1912.—Birmingham, U. K.; 1912; $1; (book).

Hermanns, H.—*Neuere Gaserzeuger mit selbsttätiger Entschlackung;* [Newer types of gas-producers with automatic clinker discharge].—Dingler's Polyt. Jnl.; Aug.3, 1912; p. 481-484*; Aug.10, pp. 503-508*; 75c.

Horstmann, H. C. and V. H. Tousley.—*Modern Illumination, Theory and Practice.*—London, 1912; $3 (book).

Klatte, O.—*High-Pressure Gas Lighting in Germany.*—Illuminatg. Engg. Soc., Proc., Sept.,1912; 2 pp; 500 w; 50c.

Kordt, —. *Gasfernversorgung;* [Long-distance gas transmission].—Jnl. f. Gasbeleuchtg., Oct.19, pp. 1021-1023; 50c.

Kothny, E.—*Gaserspärnisse in Hüttenbetrieben;* [Gas fuel economies in metallurgic works; gas-producer control].—Centralbl. d. Hütten- & Walzwerke, Oct. 25,1912; p. 562; 2700 w; 45c.

Kratz, A. P.—*Tests of a Suction Gas-Producer.*—London, 1912; $1 (pamphlet).

Krauss, —. *Die Krafterzeugung in Gaswerken;* [Obtaining the maximum effect from low-grade fuels in gas works; turbo-generators run by waste heat].—Jnl. f. Gasbeleuchtg., Sept.14, pp. 901-905; Sept. 21, pp. 925-932*; 75c.

Lansingh, Van R.—*Gas as an Illuminant.*—pp. 126-142.

Le Chatelier, H.—*La science pure orientée vers les applications et les sciences industrielles; la réduction de l'oxyde de fer et les gazogènes;* [The trend of pure science toward applied science; the reduction of iron oxide; gas-producers].—Rev. de Mét'l'gie, July,1912; pp. 509-531; $1.15.

Lewis, R. N. — *Producer-Gas Power Plants.*—Mng. & Engg. Rev., Oct., p. 45; Nov., p. —; 4000 w; 50c.

Messinger, F.—*Das Steinkohlengas im Kampf gegen die Verschwendung des Nationalvermögens;* [The gas producer and coal gas in the fight against dissipation of national resources].—Oldenburg, Germany; 1912; 138 pp; 120 figs; $1.50 (book).

Morgan, W. R.—*Chronology of the Early Development of Gas Lighting* [1450-1887].—pp. 10-16.

Munroe, C. E.—*The Present Status of the Gas Industry and Its Outlook;* [Read to Amer. Cheml. Soc., Dec.,1911].—Jnl. of Indl. & Engg. Chem'y, July,1912; p. 536; 3200 w; 65c.

Munroe, C. E.—*By-Products in Gas Manufacture.*—Franklin Inst., Jnl; July, 1912; pp. 1-35*; 65c.

Onslow, A. W.—*High-Pressure Gas for Manufacturing Purposes;* [Read to Inst. of Gas Engineers, London; abstract].—Iron & Coal Trades Rev., Junel4,1912; p. 955; 2500 w*; 35c. Also in Engnrg., Junel4, p. 810; 1000 w; 35c.

Phillips, W. B.—*The Lignite Industry in Texas;* [Discusses gas-producer plants].—Coal Age, Aug.10,1912; p. 187; 1200 w; 20c.

Pierce, R. F.—*Deterioration of Gas-Lighting Units in Service.*—Illuminatg. Engg. Soc., Proc.; Sept.,1912; 10 pp; 50c.

Rosa, E. B.—*The Use of Gas for Heat and Power; Testing of Gas.*—pp. 143-174*.

Savirón, P.—*Modificacion de un gasogeno de gas probre para la produccion de gas de agua;* [Modification of a producer-gas plant for the production of water gas; read to Soc. Espan. Fisica & Quimica].—Rev. Minera, Aug.1,1912; p. 361; 1200 w; 35c.

Schmatolla, E.—*Gas Kilns and Producers.*—Brick, Nov.1, p. 345; 800 w*; 25c.

Schmatolla, E.—*Gaserzeuger, Gasfeuerungen und öfen, insbesondere für natürlichen Zug und natürlichen Druck;* [Gas-producers, gas-firing and ovens, especially for natural draft and natural pressure].—Berlin and N. Y.; 1912 (2d edition), Vol. I, Parts 1-3; $1 (book).

Schnerr, C. A.—*The Liquid Purification of Illuminating Gas;* [Read to Illinois Gas Asso.].—Cheml. Engr., Aug.1912; p. 49; 4500 w; 35c.

Seager, J. A.—*Minor Defects in Suction Gas-Power Plants.*—Power, Sept.24,1912; p. 456; 400 w; 15c.

Smith, C. D.—*The Slagging Type of Gas Producer, with a Brief Report of Preliminary Tests.*—U. S. Bur. Mines, Techn. Paper No. 20; 1912; 13 pp.*; 10c.

Smith, H. F.—*Notes on Producer-Gas Power;* [Chemical reactions and gas purification].—Western Soc. of Engrs., Jnl.; Sept.,1912; pp. 655-676*; 65c.

Snypp, C. E.—*The Value of Sawmill Refuse as Fuel in Gas Producers.*—Asso. of Engg. Socs.; Jnl.; Aug.1912; pp. 35-42; 40c.

Stage, Alf.—*Kul og Kulprodukter;* [Coal and its products; treatise for college students].—Copenhagen, 1912; 16 pp; 50c.

Strache, H.—*Die Fortschritte des Beleuchtungswesens und der Gasindustrie im Jahre* 1911; [Progress in illumination and in the gas industry in 1911].—Munich and Berlin, 1912; $1.75 (book).

Volkmann, —. *Herstellung des Leucht-*

gases; [Review of history and present status of the production of illuminating gas].—Zts. f. angew. Chemie, Sept.6,1912; pp. 1855-1858; 45c.

Weiss and Ott.—*Das neue Lichtmess Laboratorium des Gaswerks Zürich;* [New illumination-testing laboratory of the Zurich gas works].—Jnl. f. Gasbeleuchtg., July27, 1912; pp. 737-740*; 75c.

Weisser, F.—*Die Bestimmung der Cyanverbindungen im Gaswasser;* [Determination of cyanide compounds in gas-works waters and coking by-products].—Chemiker Ztg., Nov.2, p. 1285; 30000 w; 35c.

Wort, W. E.—*Cooling Water System for Suction Producers.*—Power, Oct.8,1912; p. 534; 1000 w*; 20c.

Zeek, R. N.—*High-Pressure Gas Lighting in America.*—Illuminatg. Engg. Soc., Proc.; Sept.,1912; 5 pp; 1500 w; 50c.

Zentrale f. Gasverwertung, E. V.—*Das Gas, seine Erzeugung, Verwendung und Nebenprodukte;* [Gas, its production, uses and by-products; gas-centennial edition of the Illustrierter Ztg., Leipzig].—Berlin, 1912; 110 pp*; $1 (book).

American Gas Inst.—*Lectures Delivered at the Centenary Celebration of the First Commercial Gas Company to Sell Gas as an Illuminant.*—N. Y., 1912; 174 pp.*; (book). Contains the following papers:

———. *Chapman Rotary Gas-Producer.* —E. & M. J., Oct.19, p. 744; 400 w*; 25c.

———. *Gasgeneratoren;* [Regenerative gas burners and gas-producers].—Ton Industrie Ztg., Aug.29,1912; p. 1401; 800 w*; 35c.

———. *.Producer-Gas for Steaming Purposes;* [Terbeck flame].—Coal Age, July20,1912; p. 81; 1000 w*; 20c.

———. *State and Municipal Regulations for the Quality, Distribution and Testing of Illuminating Gas;* [1st edition, April, 1912].—U. S. Gov't. Printing Office document; 133 pp.; 50c.

———. *The Application of Chemical Control to the Operation of Water Gas Plants;* [from "Amer. Gas Light Jnl."].—Chemi. Engr., Aug.1912; p. 62; 4000 w; 35c.

———. *Ueber Verwendung roher Ignitischer Braunkohle zur Herstellung von Generator-gas;* [Use of low-grade, woody, raw lignite in gas producers at the Misburg iron foundries, Hannover].—Stein & Braunkohle, July 15, 1912; p. 163; 1000 w*; 35c.

———. *Wood-Refuse Suction-Gas Plant.* —Mechl. World, Sept.27,1912; p. 150; 1200 w*; 35c.

BY-PRODUCTS

Bersch, W.—*Die Teerfarbstoffe;* [The tar dyes; their constitution, properties, applications, etc.].—Vienna, 1912 (2d edition); 248 pp*; $2 (book).

Betts, A. G.—*Utilizing Unmined Coal for the Production of Gas;* [Betts, 1909, U. S. patent for mine-burning of thin or low-grade seams].—Jnl. of Gas Lightg., No. 2552, 1912; p. 95-96*; 50c.

Biège, H.—*Le gas d'éclairage et ses applications modernes;* [Illuminating gas and its modern applications].—Paris, 1912; 178 pp; $1.50 (book).

Braune and Hubendinck.—*Erzeugung von Teerfreien Generatorgasen aus unverkohlten Brennstoffen im Lichte der organischen Chemie;* [The production of tar-free producer-gas from non-coalized fuels, in the light of organic chemistry].—Gasmotoren Technik, Aug.,1912; pp. —; Sept., pp. 94-100*; Oct., pp. —; 95c.

Bütow & Dobbelstein.—*Ausnutzung minderwertiger Brennstoffe auf Zechen des Oberbergamtsbezirks Dortmund;* [Experiments with use of low-grade fuels in Dortmund colliery power plants; XIV: coke ash].—Glückauf, July13,1912; p. 1124; 1200 w; 50c.

Dahm, —. *Neuere Fortschritte und Erfahrungen in der technischen Verwendung der Teerprodukte für Heiz-, Kraft-, und Lichtzwecke;* [Newer advances in the technical use of tar products for heat, power and light].—Zts. f. angew. Chemie, Oct.4, pp. 2049-2058*; 50c.

Dobbelstein, O.—*Luftsalpetersäure aus Koksofengasen;* [Atmospheric nitrogen from coke-oven gases; read to Allgm. Bergmannstag, Vienna, Sept., 1912; abstract].—Montanist. Rundschau, Sept.15,1912; p. 959; 1000 w; 50c.

Douglas, A.—*Coke-Oven Gas for Municipal Uses;* [From Jnl. of Gas Lightg.].—Iron & Coal Trades Rev., Aug.16,1912; p. 241; 1000 w*; 35c.

Feld, W.—*Centrifugal Gas Washer;* [Purification of blast-furnace and producer gases; recovery of metal dust from lead and copper smelter gases; tar from coke gases].—Met. & Chemi. Engg., July,1912; p. 436; 2000 w*; 35c.

Feld, W.—*Ammonium Sulphate from Ammonia and Sulphur Dioxide;* [NH_4 and H_2S from coal gases, and extraction of am. sulphate therefrom without using sulphuric acid].—Met. & Chemi. Engg., July,1912; p. 395; 1800 w*; 35c.

Freeman, J. V.—*Loss of By-Products in Storage.*—Coal Age, July20,1912; p. 88; 500 w; 20c.

Fritzsche, P.—*Ammoniakgehalt von Kohlendestillationsgasen;* [Ammonia content of coal gas; discusses Still's work].—Chemiker Ztg., July9,1912; p. 785; 1000 w; 35c.

Gwiggner, A.—*Zur Teerbestimmung im Generatorgas;* [Tar estimation in producer gas].—Bitumen, Sept.1,1912; p. 257; 1200 w; 35c.

Haanel, B. F.—*Canadian Studies of Peat Fuel in Gas Producers and the Elimination of Tar in Producer Gas.* (Canadian Dept. of Mines Report; abstract).—Eng. News, Dec.5,1912; p. 1062; 6000 w*; 25c.

Haanel, B. F.—*Report on the Utilization of Peat Fuel for the Production of Power;* [Experiments at Ottawa government testing station].—Canada Dept. Mines, Mines Branch Paper No. 154; 140 pp*; 50c.

Huessener, K.—*Notes on the Necessity of Measuring Gas in Connection with By-Product Recovery Ovens*].—Iron & Coal Trades Rev., Sept.27,1912; p. 461; 1200 w; 35c.

Korten, Fr.—*Mechanische Kalkmilchbereitung;* [Mechanical direct production of milk of lime in production of ammonium sulphate].—Glückauf, June29,1912; p. 1042-1044*; 50c.

Krüger, H.—*Die Abscheidung des Teers aus Koksofengasen;* [Elimination of tars from coke-oven gases].—Glückauf, Aug.17, 1912; pp. 1317-1321; 50c.

Krüger, H.—*Ueber das Verhalten von Chlorammonium im Sättiger;* [The behavior of saturated warm ammonium chloride].—Glückauf, Sept.28, p. 1579; 1500 w; 45c.

Le Chatelier, H.—*Leçons sur le carbone, la combustion et les lois chimiques;* [Notes on coal and carbon, combustion and chem-

ical laws involved].—Paris, 1911; 456 pp.; 54 figs.; $3 (book).

Lemmer, A.—*Neues Destillationsverfahren für Stein- und Braunkohlenteer, Petroleumrückstände, etc.;* [New distillation process for coal and lignite tars, petroleum residues, etc.].—Bitumen, Nov.1, p. 322; 2400 w; 35c.

Lunge, Geo. and H. Köhler.—*Die Industrie des Steinkohlenteers und des Ammoniaks;* [The coal-tar, coal-oil and ammonia-products industries].—Brunswick, Germany; 1912; 2 volumes, pp. 1040; 476; 523 figures; $16 (book).

Olin, H. L.—*Coal Alteration at Lower Temperatures and the By-Products.* (Bull. No. 60, Eng. Exp. Sta., Univ. Illinois; abstract).—Mg. & Eng. World, Dec.14,1912; p. 1097; 750 w; 10c.

Rath, —. *Teer und Teeröl als Treibmittel für den Dieselmotoren;* [Production of coal tar and tar oil in Germany, and their availability in the Diesel motor].—Glückauf, June22,1912; pp. 996-1005; 50c.

Runkel, Dr.—*Fortschritte auf dem Gebeite der Nebenproduktengewinnung;* [Recent innovations in by-product recovery.—Glückauf, Nov.9, pp. 1833-1836; 50c.

Schmitz, L.—*Die flüssigen Brennstoffe;* [Liquid fuels, their production, properties and examination].—Berlin, 1912; 175 pp; 56 figs; $2.25 (book).

Scott, E. H.—*The Carbonization of Coal in Bulk.*—Gas World, 1912, No. 1454; pp. 720-721; 50c.

Weiss, J. M.—*Coal-Tar Light Oils in the U. S.; The Manufacture, Nature and Uses of Products Therefrom.*—8th Internatnl. Congr. of Appl. Chem'y, 1912; Vol. 10, pp. 287-301.

Wickware, F. G. — *European Power Plant Practice;* [Tar oil as fuel for Diesel engines].—Practl. Engr., July1,1912; p. 669; 1200 w; 25c.

Amer. Coal Products Co.—*The Production of Sulphate of Ammonia in the Year 1911;* [World's production and review].—Amer. Fertilizer, Aug.24,1912; p. 27; 4000 w; 25c.

———. *Combustion of Atmospheric Nitrogen in Coke-Oven Gas;* [F. Häusser process].—Engnrg., Sept.6,1912; p. 329; 2000 w*; 35c.

———. *Die Schwefelsaure Ammoniak im Jahre, 1911;* [Ammonium sulphate industry, 1911; abstract of report of Deu. Ammoniaks Verkaufs Ver., Ltd.].—Zentralbl. f. Kunstdünger-Ind., June7,1912; p. 171; 1000 w; 35c.

———. *Entwickelung der Schwel-Teer Industrie;* [Development of the coal-tar industry].—Deu. Bergwerks Ztg., Sept.13,1912; p. 1; Sept.24, p. 1; 2200 w; 50c.

———. *Report of Alkali Works Inspector;* [On ammonia and sulphate production in Gt. Britain in 1911].—Iron & Coal Trades Rev., July26,1912; p. 132; 1500 w; 35c.

———. *Ueber die Bedeutung der Nebenprodukten-Gewinnung aus Koksofengasen;* [Development and importance of by-product recovery in Germany from coke-oven gases].—Bergbau, Oct.31, p. 611; Nov.7, p. —; 3000 w*; 50c.

———. *Ueber die Bedeutung der Nebenproductengevinnung aus Koksofengasen;* [On the significance of the recovery of by-products from coke-oven gases] (last part).—Bergbau, Nov.28,1912, p. 674; 1400 w*; 25 cts.

———. *Ueber die Bedeutung der Nebenproducten-Gewinnung aus Koksofengasen;* [The importance of the recovery of by-products from coke-oven gases].—Bergbau, Nov.21,1912; p. 659; 2000 w*; 25c.

CHAPTER IX.

Petroleum and Natural Gas.

PETROLEUM AND OILS.

Oil Fields, Geology, Mining, etc.

Albrecht, M.—*On Oil Testing;* [Approval and revision of various German standards].—Internatnl. Asso. f. Testg. Materials, Vol. II, No. 13, 1912; 3 pp; 500 w; 95c.

Aikens, W. — *Hydro-Electric Power Plants in California Oil Fields.*—Mining & Engg. World, Oct.26, p. 751; 4500 w*; 10c.

Allen, I. C. and I. W. Robertson.—*Methods of Determining the Sulphur Content of Fuels, Especially Petroleum Products.*—U. S. Bur. of Mines, Technical Paper No. 26; 1912; 11 pp; 20c.

Allen, Irving C., and Jacobs, Walter A.—*Methods for the Determination of Water in Petroleum and Its Products.*—Tech. Paper 25, Petrol. Tech. 1, U. S. Bureau of Mines, pp* 13.

Allen, I. C., and W. A. Jacobs.—*Method for the Determination of Water in Petroleum and its Products.*—8th Internatnl. Congr. of Appl. Chem'y, 1912; Vol. 10, pp. 17-23.

Bartel, E.—*Die Maikoper Erdölindustrie;* [The petroleum industry of Maikop].—Organ d. Bohrtechniker, Sept.1,1912; p. 194; 1600 w; 35c.

Basedow, N. — *Possible Oil-Bearing Area in South Australia.*—Mng. Jnl., Sept. 14,1912; p. 901; 2700 w*; 35c.

Bernoulli, W.—*Geologische Untersuchungen in der karpathischen Sandsteinzone bei Zboro, Nordungarn;* [Geological investigations for petroleum in the Carpathian sandstone zone near Zboro, north Hungary].—Basel dissert; 1912; 20 pp*; $1 (Thesis). Reprinted in Földtani Közlöny, Vol. 42, 1912; 75c.

Blatchley, Raymond S.—*Structure of the Principal Oil Fields of Illinois.* (Paper read before Illinois State Academy of Science).—Mg. & Eng. World, Dec.14,1912; p. 1098; 2200 w*; 10c.

Blatchley, R. S.—*Oil Investigations in Illinois.*—Ill. Acad. of Sci., Trans., Jan.25, 1912; pp. 85-96.

Blatchley, R. S.—*Illinois Oil Industry; Its History and Development.*—Mining & Engg. World, June22,1912; p. 1293; 3000 w*; 10c.

Bosworth, T. O.—*Outlines of Oilfield Geology.*—Geol. Mag., Vol. 9, 1912; pp. 16-23; 53-59; 90c.

Bosworth, T. O.—*Birth of an Island near the Coast of Trinidad.*—Geol. Mag., April, 1912; pp. 159-163*; 65c.

Breger, C. L.—*Index to the World's Current Oil Literature* [on petroleum, natural gas, asphalts; occurrences, drilling, preparation, uses, geology; with list of periodical publications devoted to these subjects; bibliography of literature of first semester, 1912].—Mining & Engg. World, June22, 1912; pp. 1310-1317; 10c.

Brooks, A. H.—*Alaska Mining Industry in* 1911.—U. S. Geol. Survey, Bull. 520-A; 1912; 90 pp.*; 20c.

Cauldwell, F. W.—*Oil and Gas Motors in Southern Russia;* [Baku exhibition of oil and gas motors, May-June. 1912; also describes Baku oil fields and Baku oil industry].—U. S. Consul, Rep., July22,1912; p. 369-374; 20c.

Chambers, D. M.—*Italy as an Oil-Producing Country.*—Pet. Wld. (London), Nov.,1912; p. 467; 2000 w*; 35c.

Cipriani, E. B.—*Island of Trinidad Notes.*—U. S. Consul. Rep., Sept.10,1912; p. 1279; 400 w; 20c.

Clapp, F. G.—*Occurrences of Oil and Gas Deposits Associated with Quaquaversal Dips;* [Discusses chiefly saline dome oil fields of Louisiana and Texas, and volcanic-neck type in Tamaulipas-Vera Cruz district, Mex.].—Econ. Geol'y, June,1912; p. 364-381*; 65c.

Cooke, A. B.—*Petroleum Springs in Greece;* [Zante island].—U. S. Consul. Rep., Aug.5,1912; p. 638; 500 w; 20c.

Conradson, P. H.—*Apparatus and Method for Sulphur Determination in Petroleum, Illuminating and Lubricating Oils.*—8th Internatnl. Congr. of Appl. Chem'y, 1912; Vol. 1, pp. 133-136.

Corneloup-Korganiantz.—*Bakou et son pétrole;* [Baku and the history of its petroleum industry].—Soc. de l'Ecole Nat. d'Arts & Métiers, Bull. Technologiq., April, 1912; pp. —; $1.

Craig, E. H. C.—*The Situation in Trinidad.*—Petroleum World, Exhibn. No., Sept., 1912; p. 33; 2500 w; 45c.

Craig, E. H. Cunningham.—*The Prospectus of an Oil Company; As It Is and As It Might Be.*—Mng. Jnl., Aug.17,1912; p. 813; 1200 w; 35c.

Craig, E. H. C.—*Oil Finding;* [Geology, genesis and prospecting of oil pools].—London, 1912; pp. —; $2.75 (book).
Reviewed in London Mng. Jnl., June22, 1912; p. 617; 4500 w; 35c.

Dalton, L. V.—*Venezuela;* [Includes notes on oil and asphalts].—London, 1912; pp. —; 34 figs; map; $3.50 (book).

Dalton, L. V.—*Geology of Venezuela;* [Ecomonic geology of coal, iron, gold, copper, oil].—Geol. Mag., May,1912; pp. 203-210; 65c.

Day, D. T. and B. Mill.—*The Production of Natural Gas in* 1911.—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 59 pp.; 10c.

Day, D. T.—*The Production of Petroleum in* 1911; [In Cal., Colo., Ill., Ind., Kans., Ky., La., Mich., Mo., N. Y., Ohio, Okla., Penn., Tex., Utah, Wyom., W. Va.; also abroad in Canada, Mexico, Peru, Argentina, Chile, Colombia, Bolivia, Russia, Galicia, Hungary, Roumania, Germany, Gt. Britain; N. S. Wales, Italy, B. India, E. Indies, N. Zealand, Japan; Madagascar, Honduras, Timor, Cuba].—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 152 pp.; 20c.

Day, D. T.—*Wyoming Oil Fields;* [Abstract from Mineral Resources for 1911].—Mng. Sci., Sept.19,1912; p. 181; 1300 w; 20c.

Day, D. T.—*Petroleum Production for* 1911 *was* 220,449,391 bbls.; [Summary of U. S. Geol. Survey final report for 1911].—Oil Age, Aug.2,1912; p. 1; 750 w; 20c.

Deustua, R. A.—*The Oil Industry in Peru.* (Boletin du la Sociedad Nacional de Minera, Santiago de Chile, 1912; abstract).

—Mg. Jnl. (London), Nov.30,1912; p. 1168; 2000 w; 35c.

Deustua, R. A.—*Estado actual i porvenir de la industria petrolifera en el Perú;* [Present status and future outlook for the petroleum industry of Peru].—Soc. d. Ingrs. (Peru), Bol.; Feb.,1912; pp. 57-90; March, pp. 109-132; April; May, pp. 195-218*; June, pp. 269-287*; $2.75.
English summary in "Peru Today," April, 1912; p. 25; 3200 w*; 25c.

Ellis, R. W.—*Mining Prospects of Argentina.*—Mining & Engg. World, July27,1912; p. 148; 800 w; 10c.

Engler, C., and S. Bobrzynski.—*The Origin and Optical Activity of Petroleum:* [From "Petroleum Review"].—Oil Age, Aug.23,1912; p. 1; 2100 w; 20c.

Engler, C.—*Relation of Migration to Composition of Petroleum;* [From "Petroleum Review"].—Oil Age, Sept.13,1912; p. 6; 1000 w; 20c.

Engler, C., and J. Bobrzynski.—*Zur Frage der Entstehung des Erdöls;* [Optically active constituents and the genesis of petroleum].—Chemiker Ztg., July23,1912; p. 837; 2000 w; 35c.

Fea, L.—*Practical Determination of the Viscosity of Oils.*—Internatnl. Asso. f. Testg. Materials. Proc., Vol. II, No. 13; 1912; 18 pp*; 95c.

Frentzel, A.—*Die Oelfelder von Gurien;* [The Guria oilfields, Kutai, Russia; chiefly geologic].—Petroleum, Sept.4, p. 1301; 2000 w*; 45c.

Frolow, W.—*Nachlassen der Bohrtätigkeit im Baku-Gebiete;* [The decline of new drillings undertaken in Baku, and probable causes; from Neftyanoye Dyelo].—Organ d. Bohrtechniker, July1,1912; p. 151; 500 w; 35c.

Fundatiano, C. H.—*L'industrie du pétrole en Roumanie;* [Monograph of the petroleum industry of Roumania; thesis].—Paris, 1912; 156 pp.; $3.

Garfias, V. R.—*The Effect of Igneous Intrusions on the Accumulation of Oil in Northeastern Mexico* [Vera Cruz].—Jnl. of Geol'y, Oct.-Nov.,1912; pp. 666-672*; 65c.

Geiringer, E.—*Progress in the New Galician Fields.*—Petroleum World, Oct.,1912; p. 418; 750 w; 35c.

Glasenapp, M.—*Ueber den Faulschlamm von Suschenhof bei Riga;* [The foul-slime, or sapropel of Potonié; deposits near Arensburg and at Suschenburg, near Riga, Russia].—Riga Industrie Ztg., June30,1912; p. 177; 3000 w*; 45c.

Guillaume, E.—*Verfahren zur ununterbrochenen fraktionierten Destillation;* [Process for continuous fractional distillation of liquid mixtures, especially petroleums; German Pat. No. 240,580].—Allgm. Oestr. Chemiker Ztg., June15,1912; p. 92; 1500 w*; 35c.

Guiselin, A.—*Action of Argillaceous Earth on Petroleum;* [From Petroleum Rev.].—Oil Age, Sept.27,1912; p. 5; 1000 w; 20c.

Gurwitsch, —. *Chemie und Technologie des Erdöls;* [Chemistry of the petroleum hydrocarbons and their derivatives].—Zts. f. angew. Chemie, Sept.13, pp. 1897-1904; Sept.20, pp. —; 75c.

Hager, D.—*Some of the Accidents Occurring in Oil Wells.*—Mining & Engg. World, Aug.17,1912; p. 290; 750 w; 10c.

Harrington, Jos.—*Furnace Efficiency.*—Jnl. West. Soc. Eng., Nov.,1912; p. 893; 35 p.*; 60c.

Harrington, C. L.—*Mineral Resources of South America.*—See under Copper.

Harris, G. D.—*Oil Concentration about Salt Domes;* [In gulf states coastal regions].—Science, New Series, 1912; Vol. 35; p. 546; 50c.

Hautpick, E. de.—*Russian Oil;* [Describes chiefly Maikop developments].—Mng. Jnl., Oct.19, p. 1025; 1500 w; 35c.

Hautpick, E. de.—*Organization of Capital in Russian Petroleum Industry.*—Mng. Jnl., Oct.12, p. 992; 2100 w; 35c.

de Hautpick, E.—*Russian Oil;* [Recent developments].—Mng. Jnl., June15,1912; p. 589; 1000 w; 35c.

de Hautpick, E.—*Chatma Oilfields;* [Tiflis, Caucasus].—Mng. Jnl., July6,1912; p. 679; 800 w; 35c.

Hautpick, E. de.—*Russian Oil;* [Maikop and Grozny, 1st 5 months of 1912; new Russian General Oil Corp.].—Mng. Jnl., July27,1912; p. 749; 1800 w; 35c.

Hautpick, E. de.—*Ural Caspian Oil Fields.*—Mng. Jnl., Aug.31,1912; p. 855; Sept.7. p. 875; 4000 w; 50c.

Hautpick, E. de.—*Russian Oil Fields Today;* [Maikop, Ukhta, Ferghana, new Caucasian fields].—Mng. Jnl., Oct.5, p. 970; 2000 w; 35c.

Hautpick, E. de.—*Distribution of Russian Petroleum Market.*—Mng. Jnl., Nov.2, p. 1063; 1000 w; 35c.

Hautpick, E. de.—*Position of Russian Petroleum Refining.*—Mng. Jnl., Nov.2, p. 1075; 1000 w; 35c.

Heym, W.—*Mineral Resources of Japan;* [in German].—See under Coal.

Higgins, W. F.—*Physical Science and the Oil Industry;* [Physical properties and their investigation; density, flash point, viscosity]. — Petroleum World, Exhibn. No., Sept.,1912; p. 29; 3500 w; 45c.

Höfer, H. von.—*Temperature in Oil Regions.*—Economic Geol'y, Sept.,1912; pp. 536-541; 65c.

Hornaday, W. D.—*The Oil Fields of Texas and Their Development.*—Mining & Engg. World, June22,1912; p. 1299; 2000 w*; 10c.

Hornaday, W. D.—*Importance of Mexico as a Petroleum Producer.*—Mining & Engg. World, June22,1912; p. 1307; 3600 w; 10c.

Hornaday, W. H.—*A Large American Oil Syndicate in Mexico;* [Dohey developments in Vera Cruz].—Mining & Engg. World, Aug.17,1912; p. 296; 1200 w; 10c.

Hornaday, W. D.—*Tampico Is Now Mexico's Largest Oil Port;* [Shipping facilities].—Mining & Engg. World, Sept.21,1912; p. 527; 2000 w*; 10c.

Howard, L. O.—*The Utah Oil Refining Co.;* [Treatment of Utah and Wyoming (Spring Valley and Casper) oils at Salt Lake City].—Salt Lake Mng. Rev., Sept. 15,1912; p. 11; 2000 w*; 25c.

Isco, V.—*Die Antiklinale Zone Boldesti-Hârsa;* [The Boldesti-Hârsa anticlinal in the Tsintea-Moreni districts, Roumania; from Rev. du Pétrole].—Organ d. Bohrtechniker, Sept.1,1912; p. 197; 2100 w*; 45c.

Ismalun, M. — *Petroleumvorkommen in Aegypten;* [Petroleum resources and developments in Egypt].—Petroleum, Aug.21, p. 1263; 1200 w; 45c.

Jamison, C. E.—*The Casper, Wyoming, Oil Field.*—E. & M. J., June29,1912; p. 1277; 400 w; 25c.

Jenkins, C.—*Oil Production and Consumption in Canada.*—Oil Age, Oct.4,1912; p. 6; 1100 w; 20c.

Jiménez, J. V.—*La industria del petróleo en el Perú;* [Petroleum industry of Peru]. —Soc. Cient. Argentina, Anales; March, 1912; pp. 120-155; 75c.

Jimenez, C. P.—*Estadistica minera en 1909 y 1910; Peru.*—See Copper.

Johnson, R. H.—*The Accumulation of Oil and Gas in Sandstone;* [Discusses surface tension and capillarity].—Science, 1912, Vol. 35, pp. 458-459; 50c.

Jones, L. B.—*Welding of High-Pressure Pipe Lines;* [Natural gas and oil].—Jnl. of El'y Power & Gas, Sept.21,1912; p. 257; 3000 w*; 35c.

Kay, F. H.—*The Carlinville Oil and Gas Field, Illinois.*—Ill. Geol. Survey, Bull. 20; 1912; pp. 39-50*; 50c.

Kissling, R.—*Die Erdölindustrie im Jahre* 1911; [The petroleum industry in 1911; production and technology].—Chemiker Ztg., Sept.5,1912; p. 1009; Sept.10; 5000 w; 45c.

Knapp, I. N.—*Natural Gas, with Incidental Reference to Other Bitumens.*—Jnl. Fr. Inst., Nov.,1912; 22 pp*; 75c.

Kobayashi, G.—*Influence of Petroleum on the Geothermic Gradients in the Echigo Oil Fields.*—Geol. Soc. of Tokyo, Jnl.; Vol. 19, 1912; pp. 9-12.

Kravani, V.—*The Oil Fields of Galicia.*—Mng. Jnl., June15,1912; p. 612; 3000 w; 35c.

Lippincott, S. R.—*Oil and Gas East of the Mississippi in Louisiana, Mississippi, and Alabama.*—Nat. Gas Jnl., Nov.,1912; p. 528; 1400 w; 25c.

Lucas, A. F.—*The Dome Theory of the Coastal Plain.*—Science, N. S., Vol. 35, 1912; p. 961-964; 50c.

Macer, A. T.—*Transvaal Oil Shale.*—Afr. World, Aug.10,1912; p. 19; 1000 w; 35c.

Manning.—*Mining Development in Colombia.*—See Colombia.

Martin, A. H.—*The Coalinga Oil Field, California.*—Mng. Jnl., Nov.9, p. 1103; 1000 w; 35c.

Martin, A. H.—*Standard Oil Co.'s Big Refinery at Richmond, Cal.*—Mg. & Eng. World, Nov.30,1912; p. 997; 1500 w*; 10c.

Martin, A. H.—*Productive Rate of California Oil Wells.*—Mining & Engg. World, Oct.19, p. 712; 600 w; 10c.

Martin, A. H.—*California Oil Fields;* [Review of present status of industry].—Mng. Jnl., Sept.28,1912; p. 918; 2100 w*; 35c.

Macdonald, Geo.—*The Petroleum Fields of the World.*—London, 1912; Map, 40x30 ins; $1.75.

McQueen, Chas.—*The Scottish Shale Oil Industry.*—Edinburgh, 1912; pp. —; 50c.; (book).

Abstract and review in Petroleum World, Exhibn. No., Sept.,1912; p. 50; 600 w; 45c.

Mendel, J.—*Internationale Petroleumstatistik;* [International statistics of the petroleum industry; production, refining, trade; Vol. II, Austria-Hungary].—Vienna, Berlin, 1912; 96 pp; $1.50 (book).

Moorhead, M. K.—*Burmese Petroleum Industry.*—U. S. Consul. Rep., July25,1912; p. 442; 600 w; 20c.

Mrazec, L.—*Zur Frage der unterirdischen Gewässer in Rumänien;* [Problem of ground water in Roumanian oil fields].—Allgm. Oestr. Chemiker Ztg., July16,1912; p. 107; 1600 w; 45c.

Müller, G. C. H.—*Der bituminöse Alaunschiefer und seine Verwertung;* [The oil shales of central Sweden, and their utilization].—Kohle & Erz, Sept.23,1912; p. 975; 1800 w; 35c.

Noth, J.—*Die ärarischen Petroleumfelder Galiziens;* [The governmental oilfields of Galicia; read to Allgm. Bergmannstag, Vienna, 1912; abstract].—Montanist. Rundschau, Sept.15,1912; p. 964; 800 w; 50c.

Olszewski, S.—*Karte der bergmännischen Industrie Galiziens;* [Mining map of Galicia; with text in Polish and a briefer text edition in German].—Vienna, 1912; $10 (map alone, $3.50).

Olszewski, S.—*Erdölvorräte der galizischen Karpathen;* [Petroleum resources of the Carpathian range in Galicia; from "Ropa"].—Organ d. Bohrtechniker, Nov.1, p. 252; 3000 w; 45c.

Olszewski, S.—*Die Rohöllinie Brzozow-Humniska;* [The "oil-line" or anticlinal of the Brzozow-Humniska district, Galicia].—Allgm. Oestr. Chemiker Ztg., Oct.1, p. 148; 1600 w*; 35c.

Ostrander, F. V.—*The Refining of Petroleum.*—Oil Age, June21,1912; p. 2; p. 6; p. 10; 3500 w; 20c.

Pring, J. N. and D. M. Fairlie.—*Synthesis of Hydrocarbons at High Temperatures and Pressures;* [Read to Internatnl. Congr. Appl. Chem'y; brief abstract].—Met. & Chem'l. Engg., Sept. Suppl.; 1912; p. 586; 1000 w; 35c.

Prutzman, P. W.—*History and Geology of the California Oil Fields.*—Mining & Engg. World, June22,1912; p. 1287; 7500 w; 10c.

Rakusin, M. A.—*Bericht über die Fortschritte der Naphthologie in Russland im Jahre* 1911; [Review of progress in oil production, geology and technology in Russia in 1911].—Petroleum, June5,1912; p. 933; 5000 w; 50c.

Rakusin, M. A.—*Ueber die optischen und einige andere Eigenschaften des Erdöls aus Patagonien;* [On the optical and some other properties of Patagonian petroleum]. —Petroleum, Oct.2, p. 9; 800 w; 45c.

Rakusin, M.—*Ueber die Erdöle aus Süd-Bolivien;* [The oilfields of southern Bolivia]. —Petroleum, June19,1912; p. 985-987*; 45c.

Rickard, T. A.—*Coalinga, a California Oilfield.*—Mng. Mag., Oct., p. 283; 3000 w*; 45c.

Romberg, —. *Ueber das Erdöl;* [Varieties, history, origin and occurrences of petroleum].—Dinglers Polyt. Jnl., Aug.17,1912; pp. 513-517; 50c.

Scholz, A.—*Untersuchung und Probeverarbeitung eines bituminösen Schiefers;* [Testing and sample preparation in a bituminous shale].—Chemiker Ztg., Aug.20, 1912; p. 943; 1000 w; 35c.

Shaw, E. W.—*The Carlyle Oil Field and Surrounding Territory;* [Illinois].—Ill. Geol. Survey, Bull. 20; 1912; pp. 1-38*; 50c.

Siegfried, E.—*Die Naphthalagerstätten der Umgebung von Solotwina;* [Geology and tectonics of the Solotwina oil field, east Carpathians, Galicia].—Petroleum, July3, 1912; p. 1049; July17, p. 1106; July31, p. —; 21,000 w*; 95c.

Skertchly, S. A. R.—*The Mexican Oil Fields.*—Mng. Mag., Sept.,1912; p. 199; 3000 w*; 35c.

Smith, J. T.—*Studying for the Oil Degree;* [New course at Birmingham; methods and equipment].—Petroleum World, Oct.,1912; p. 419; 1200 w*; 35c.

Smith, J. T.—*The French and English Petroleum Industries.*—Pétrole, Sept.1, p. 1; 1200 w; 35c.

Smith, J. T.—*The Petroleum Industry*

To-Day; [World production and resources, 1911].—Petroleum World, Exhibn. No., Sept.,1912; p. 13; 4900 w*; 45c.

Stein, P.—*Bohren und Oelgewinnung auf den norddeutschen Erdölfeldern;* [The north German oilfields, with notes on drilling practice and oil recovery].—Petroleum, Sept. 4, p. 1306; 900 w; 45c.

Steinkopf, Wm.; A. K. Koss and S. Liebmann.—*Untersuchung über die Anwesenheit von Cholesterin in Javaölen;* [Researches on the cholesterine in Java petroleums exhibiting left-handed rotation to polarized light].—Chemiker Ztg., June11, 1912; p. 653; 2000 w; 35c.

Stopnewitsch, A.—*Die Erdölindustrie im Kubandistrikt,* 1911; [Review of the petroleum production of the Kuban district, 1911].—Organ d. Bohrtechniker, Oct.1, p. 231; 400 w; 35c.

Storms, W. H.—*Menace of Water in the California Oil Fields;* [From Western Engg., 1912].—Oil Age, July26,1912; p. 2; p. 6; Aug.2, pp. 7, 10, 14; 3500 w; 30c.

Storms, Wm. H.—*Growth of the Petroleum Industry in California.*—Mining & Engg. World, June22,1912; p. 1285; 2500 w*; 10c.

Svimonoff.—*Data of Russia's Principal Mines and Oil Wells.*—See under Gold.

Szajnocha, L.—*Das Erdölverkommen in Galizien in Lichte neuer Erfahrungen;* [Geology, genesis and production of petroleum in Galicia].—Geol. Ges. Wien, Mittlngn.; Vol. 4, 1911; pp. 17-36.

Tacit, V. and Puschcariu.—*Hydraulische Ventil für Eriptivbrunnen;* [Hydraulic valve for gushers].—Organ d. Bohrtechniker, Sept.1,1912; p. 199; 1000 w*; 45c.

Tacit, V.—*Die Ausbeutung der Eruptivsonden und Sicherheitsmassregeln gegen ihre Feuergefähr;* [Equipment of gushing wells and safety measures for fire prevention; from Monitr. du Pétrole Roumain, No. 16, 1912].—Organ d. Bohrtechniker, Aug.1, 1912; p. 170; 2100 w*; 45c.

Tacit, M. V.—*Oelförderung aus eruptiven Sonden und Sicherheitsmassnahmen zur Verhütung von Bränden;* [Recovery of oil from gushers, and prevention of fires; from Monitr. du Pétrole Roumain, No. 16, 1912].—Petroleum, Sept.4, p. 1343; 500 w; 45c.

Tanasescu, J. and V. Tacit.—*Der Apparat "Salvator" für den Betrieb von Eruptivsonden;* [The Tanasescu-Tacit "Salvator" apparatus for regulating the flow of gushing wells; from Monitr. du Pétrole Roumain].—Allgm. Oestr. Chemiker Ztg., Sept.15,1912; p. 139; 1200 w*; 35c.

Tarbell, W. S.—*Salt Creek Oil Field Developments, Wyom.*—Mng. Investor, July1, 1912; p. 108; 500 w; 25c.

Titus, R.—*Förderung des Erdöles aus aufgeschlossenen Bohrlöchern;* [Methods of obtaining oil from oil wells].—Petroleum, June,1912; p. 998; 2400 w; 45c.

Thompson, A.—*The Katalla, Alaska, Oil Field.*—M. & S. P., Aug.10,1912; p. 169; 1200 w*; 20c.

Thompson, A.—*Oilfields of the Katalla, Alaska, Regions.*—Oil Age, Aug.23,1912; p. 6; 1000 w; 20c.

Tulschinsky, K. N.—*Naphthavorkommen auf Russisch-Sachalin;* [Oilfields of Russian Saghalien].—Petroleum, June19,1912; p. 987-993*; 45c.

Twelvetrees, W. H.—*Shale Fields of the Mersey District, Tasm.*—Australian Mng. Standd., Aug.8,1912; p. 132; 1400 w; 35c.

Ubbelohde, L., and Philippide, S.—*Ueber die Einwirkung von Katalysatoren auf Erdöl;* [Effect of various catalyzing agents on petroleums]. — Petroleum, Aug.21, p. 1233-1238*; 2000 w; tables; 45c.

Ungermann, Cl.—*Allgemeiner Naphtha Geologe;* [Petroleum Geology].—Vienna, 1912; pp. —; 60 figs; $2.75 (book).

Wegemann, C. H.; C. E. Jamison, and A. C. Veatch.—*Geology of Wyoming's Leading Petroleum Sections.*—See under Wyoming.

White, D.—*A Great Reservoir of Oil Fuel;* [Oil shale possibilities in Paleozoic black shales of eastern and central states when petroleum pools are exhausted].—Engg. News, Oct.17, p. 696; 3600 w; 25c.

Wilde, G. M.—*Petroleum from the Field to the Refinery.*—Oildom, Aug.,1912; p. 6; 1500 w; 35c.

Wolf, J. H. G.—*Production and Allied Statistics, California Oilfields;* [Monthly, Feb.,1910-July,1912].—M. & S. P., Sept.21, 1912; p. 402; 1500 w; tables; 20c.

Wood, R. H.—*Oil and Gas Developments in North-Central Oklahoma.*—U. S. Geol. Survey, Bull., 531-B; 1912; 31 pp.*; 10c.

Wooton, Paul.—*History and Development of Louisiana's Oil Fields.*—Mining & Engg. World, June22,1912; p. 1296; 3000 w*; 10c.

Wright, A. C.—*Water Emulsions in Crude Petroleum;* [Discusses dehydration methods; from Western Engg.].—Oil Age, June14,1912; p. 7, 10; 1600 w; 20c.

Young, G. A.—*Geology of the Moncton Map Area, Westmoreland and Albert Counties, N. B.;* [Chiefly oil and gas].—Canada Geol. Survey, Rep. f. 1911; 1912; pp. 309-322.

Zuber, R.—*Geologische Beobachtungen aus West Afrika;* [Geology of the flysch-like deposits of bitumen and petroleum along the Guinea Coast, W. Africa].—K. K. Geol. Reichs- Anst., Verhandl.; 1911; pp. 89-106.

Dr. G.—*Die gegenwärtige Lage der Hand-Brunnenschöpfung in Baku;* [Present status of hand bailing in the Baku oil field, Russia].—Petroleum, Sept.4, p. 1307; 400 w; 45c.

Dr. G.—*Neuerungen auf dem Gebiete der Bohrtechnik;* [Innovations in drills, bits, and oil-well drilling accesories].—Petroleum, Sept.4, p. 1353-1361; 4000 w*; 45c.

E. G.—*Das Erdöl auf Sachalin;* [Petroleum on Saghalien, Siberia; from the Anglo-Russian Gazette].—Allgm. Oestr. Chemiker Ztg., Oct.15, p. 159; 500 w; 35c.

Natnl. Electric Light Asso.—Fuel Oil Production and Status of the Oil Engine committee].—Power, July9,1912; p. 51-53; In the U. S.; [Report of "prime movers" tables; 2000 w; 15c.

"Whit."—*Review of the Wyoming Oil Fields;* [from "Oil City Derrick"].—Oil Age, Nov.15, p. 5, p. 7; p. 10; Nov. 22, p. —; 4500 w; 30c.

———. *A Liquid Fuel System;* [Wallsend-Howden methods for steam raising].—Petroleum World, Sept.,1912; p. 386; 1500 w*; 35c.

———. *A Non-Explosive Lamp Oil;* ["Neo-Petroleum"]. — Petroleum World, June,1912; p. 248; 750 w; 35c.

———. *A Turkish Oil Field;* [Midway between Constantinople and Salonica].—Petroleum World, Oct.,1912; p. 434; 750 w*; 35c.

———. *Burmese Petroleum Industry,* 1911.—E. & M. J., Aug.31,1912; p. 411; 500 w; 25c.

———. *Closing a Spouting Oil Well;* [Method at Potrero del Llano; from Lon-

don "Engineer," May17,1912].—Engg. News, June27,1912; p. 1225; 500 w*; 25c.

———. *Deepening and Sealing a 20-inch Well;* [Stourbridge, U. K. water supply].—Engg. Record, July13,1912; p. 51; 1000 w; 20c.

———. *Der Kampf mit dem Wasser im kalifornischen Erdölfeld;* [Combating water in the California oilfields; from Petroleum Gazette].—Organ d. Bohrtechniker, July1,1912; p. 152; 1000 w; 35c.

———. *Development in the Wyoming Oil Fields.*—Mng. Sci., Dec.5,1912; p. 359; 800 w; 20c.

———. *Die Aussichten der russischen Petroleumindustrie;* [Outlook of the Russian oil industry, 1912, and production for 1st quarter; from Neftyanoye Dyelo].—Allgm. Oestr. Chemiker Ztg., July16,1912; p. 110; 600 w; 45c.

———. *Die Erdölfelder von Neu Seeland;* [Progress on the oil fields of New Zealand to May, 1912].—Organ d. Bohrtechniker, July16,1912; p. 165; 1000 w; 45c.

———. *Die Erdöllagerstätten von Chile;* [Oil fields of Chile; from "Petroleum Review"].—Allgm. Oestr. Chemiker Ztg., Aug. 1,1912; p. 119; 1000 w; 45c.

———. *Die Erdöllagerstätten im Ural;* [Oilfields of the Urals; from "Neftyanoye Dyelo"].—Allgm. Oestr. Chemiker Ztg., Aug.15,1912; p. 123; 1300 w; 45c.

———. *Die Erdölsonde 1 "Colombia," Moreni;* [Colombia Well No. 1, Moreni field, Roumania].—Allgm. Oestr. Chemiker Ztg., Sept.1,1912; p. 133; 800 w; 45c.

———. *Die Petroleumfunde in Argentinien und ihre Bedeutung;* [The petroleum discoveries in Argentina and their significance].—Montan Ztg., Nov.15,1912; p. 437; 1300 w; 35c.

———. *Die Petroleumindustrie in Rumänien,* 1911; [Petroleum production in Roumania in 1911; with statistics of operating companies].—Montan. Ztg., Oct.1, p. 372; Oct.16, p. —; 5000 w; 50c.

———. *Die Petroleumindustrie von Baku;* [Petroleum industry of Baku; report of Austrian vice-consul for 1911].—Montan Ztg., Sept.15,1912; p. 348; 2000 w; 35c.

———. *Die Oelfelder von Birma;* [The oil fields of Birmah; from "Petroleum Review"].—Organ d. Bohrtechniker, July16, 1912; p. 164; 1000 w; 45c.

———. *Die Oelfelder Sachalins;* [The oilfields of Saghalien Island, east Siberia].—Petroleum, May15,1912; p. 877-881; 4000 w*; 45c.

———. *Die russische Erdölausbeute;* [Russian oil industry in 1912; from Anglo-Russian Gazette].—Allgm. Oestr. Chemiker Ztg., Oct.15, p. 157; 1000 w; 35c.

———. *Die russische Petroleumindustrie* 1911; [Review of the petroleum industry in Russia, 1911; from Monitr. du Pétrole Roumain].—Allgm. Oestr. Chemiker Ztg., July 1,1912; p. 97; 1800 w; 35c.

———. *Die Verkappung eines Oelgushers;* [Capping the Potrero del Llano gusher; from report of British consul at Tuxpan, Mex.].—Organ d. Bohrtechniker, Aug.1, 1912; p. 178; 600 w*; 45c.

———. *Drilling and Pumping by Electricity;* [Midway oil field, Calif.].—Oil Age, Oct.18, p. 5; 1000 w; 20c.

———. *Erdöl und Petroleum in Oesterreich;* [Petroleum and oil industries in Austria in 1911; report of Niederöstr. Handels & Gewerbe Kammer, Vienna].—Allgm. Oestr. Chemiker Ztg., Aug.1,1912; p. 113; Aug.15, p. —; 4000 w; 65c.

———. *Erdölvorkommen in der Bukowina;* [Petroleum resources of Bukowina].—Allgm. Oestr. Chemiker Ztg., Nov.1, p. 161; 2100 w; 45c.

———. *Erdölschürfungen in Westafrika;* [Petroleum prospects in British and French West Africa].—Allgm. Oestr. Chemiker Ztg., Aug.15,1912; p. 126; 500 w; 35c.

———. *Fortschritte der Technik; Oel Ladestelle;* [Oil loading equipment for engines, tank cars and tank wagons; McDonald system].—Petroleum, Aug.7,1912; p. 1188; 250 w*; 45c.

———. *Hamburgs Petroleumhandel im Jahre,* 1911; [The petroleum industry through the port of Hamburg, 1911].—Petroleum, Oct.2, p. 10; 1500 w; 45c.

———. *La Industria del Petróleo en el Perú;* [The petroleum industry in Peru].—Informaciones y Memorias, Sept.,1912, p. 428; 900 w; 50 cts.

———. *Lakeview No. 2 Oil Co. Lands Casing;* [Fighting gas pressure in laying 6¼-inch casing at 3901 ft. depth].—Oil Age, July26,1912; p. 5; p. 7; 1000 w*; 20c.

———. *Liste die in Mexiko arbeitende Gesellschaften;* [List of Mexican oil operators].—Petroleum, Sept.4, p. 1371; 500 w; 45c.

———. *"Mexican" and "California" Petroleum Co.'s.*—M. & S. P., Nov.9, p. 598; 800 w; 20c.

———. *Mineral Production of the U. S. in* 1911. (U. S. Geol. Survey publication).—Mg. & Eng. World, Dec.14,1912; p. 1007; 500 w; 10c.

———. *New Oil Separator;* [Tatman coils for eliminating emulsified water].—Oil Age, Nov.15, p. 6; 1000 w*; 20c.

———. *Oilfields of Sakhalin Island.*—Oil Age, July19,1912; p. 7; 1000 w; 20c.

———. *"Oil Age" June Statistics of California Production and Consumption.*—Oil Age, July26,1912; p. 1; 1000 w; tables; 20c.

———. *Oil Boom in Illinois;* [from "Oil Paint & Drug Reporter"].—Petroleum World, Exhibn. No., Sept.,1912; p. 85; 1000 w; 45c.

———. *Oil in South Africa;* [Transvaal oil shales and indications in Ceres and Mossel Bay districts, Cape Colony.—S. Afr. Mng. Jnl., Sept.7,1912; p. 13; 1300 w; 35c.

———. *Oil Shales of Pictou County, N. S.*—Canadian Mng. Jnl., Oct.1, p. 675; 1500 w; 25c.

———. *Petroleum and Bitumen Prospecting in West Africa.*—S. Afr. Engg., July,1912; p. 4; Aug., p. 21; 1000 w*; 50c.

———. *Petroleum Development in Tampico Region, Mexico.*—Oil Age, Sept.6,1912; p. 1; 1800 w; 20c.

———. *Petroleumfunde in Argentinien;* [Status of petroleum developments in Argentina; from Austrian consular report].—Petroleum, Sept.4, p. 1371; 1000 w; 45c.

———. *Petroleumproduktion Rumäniens;* [Review of petroleum production, exports and borings in Roumania, 1st half-year 1912.]—Petroleum, Aug.21, p. 1255; 1000 w; 45c.

———. *Possibilities of the Shale Oil Industry;* [Describes technology of Scotch practice].—S. Afr. Mng. Jnl., June1,1912; p. 509; 2500 w; 35c.

———. *Production of California Petroleum, August,* 1912.—Oil Age, Sept.27,1912; p. 1; 1000 w; 20c.

———. *Prospecting the Transvaal Oil*

Shales.—Mining & Engg. World, Oct.19, p. 714; 800 w; 10c.

———. *Remarkable Growth of the Petroleum Industry in the U. S.*—Mining & Engg. World, June22,1912; p. 1283; 1000 w; 10c.

———. *Rohölpreise in den V. S. und Kanada;* [Crude oil prices in U. S. and Canada, midyear, 1912].—Petroleum, Aug.21, p. 1262; 600 w; tables; 35c.

———. *Russland;* [Development of Russian petroleum industry in 1911 and first half of 1912].—Petroleum, Sept.18, p. 1439-1444; 45c.

———. *Separating Water from Oil;* [Electrical process]. — Petroleum World, Exhibn. No., Sept., 1912; p. 91; 500 w; 45c.

———. *Screen Pipes for California Oil Wells.*—Mg. & Eng. World, Nov.16,1912; p. 898; 1000 w; 10c.

———. *Status of the Oil Industry in Colorado.*—Mining & Engg. World, June22, 1912; p. 1292; 800 w; 10c.

———. *The Dome Theory of Accumulation of Oil in the Gulf Coastal Plain;* [Discussion by A. F. Lucas and G. D. Harris; from "Science"].—E. & M. J., July13,1912; p. 57; 600 w; 25c.

———. *The Roumanian Petroleum Industry in* 1911; *and Permanence of the Galician Oilfields.*—Mng. Jnl., Oct.26, p. 1054; 1055; 1100 w; 35c.

———. *The Scottish Shale Oil Companies;* [Present status and 1910-11 dividends].—Petroleum World, July,1912; p. 299; 1500 w; 35c.

———. *Trinidad Oil Industry;* [Official Report for 1911-12].—Petroleum World, Sept.,1912; p. 372; 800 w; 35c.

———. *Wyoming Oil Fields.*—Oil Age, Nov.1, p. 6; 2500 w; 20c.

Uses and Products

Archbutt, L., and R. M. Deeley. *–Lubrication and Lubricants.*—London, 1912 ...d edition); 336 pp.; $7.50; (book).

Armstrong, J. T.—*Advantages of Solid Oil Fuel over Liquid Oil Fuel;* [Read to Oil Engg. Exhibition, London, 1912].—Oil Age, Oct.11,1912; p. 1, p. 10; Oct.18, p. —; 5000 w; 30c.

Beaugeard, T.—*Oil and the Aeroplane.* Petroleum World, Exhibn. No., Sept.,1912; p. 35; 1200 w*; 45c.

Booth, Wm. H.—*Progress of Liquid Fuel.* —Petroleum World, Exhibn. No., Sept.,1912; p. 19; 5000 w*; 45c.

Burchbuut, L., and R. M. Deeley.—*Lubrication and Lubricants.*—London, 1912 (3d edition); $8; (book).

Ellis, R. L.—*The Relation Between Temperature and Viscosity of Lubricants; Ellis-Elebash Temperature; Viscosity Law.*— Met. & Chemi. Engg., Sept.,1912; p. 546; 2500 w*; 35c.

Flachs, Dr. — *Benzintankwagen für Heereszwecke;* [Benzine auto tank car, especially for military purposes].—Allgm. Oestr. Chemiker Ztg., Nov.1, p. 163; 1800 w*; 45c.

Friday, P. J.—*The Paraffin Series of Hydrocarbons.*—Oil Age, Sept.27,1912; p. 10; p. 13; 1300 w; 20c.

Gray, T. T.—*A Comparison of the Engler and Saybolt Viscosities of Mixed Oils.*—8th Internatnl. Congr. of Appl. Chem'y, 1912; Vol. 10, pp. 153-158.

Gulselin, A.—*The Qualities of Petroleum for Illuminating Purposes.* — Petroleum World, Oct.,1912; p. 423; 2500 w*; 35c.

Gurwitsch, L.—*Zur Kenntnos des Adsorptionsvorganges bei den Erdölprodukten;* [Contribution to the knowledge of the adsorption reactions with petroleum products]. —Petroleum, Oct.14,1912; p. 65; 2500 w; 60c.

Gwosdz, J.—*Gaserzeuger für Vergasung flüssiger Brennstoffe;* [Gas producer types for gasification of liquid fuels].—Braunkohle, Sept.6, pp. 357-366*; 50c.

Haanel, B. F.—*Canadian Studies of Peat Fuel in Gas Producers and the Elimination of Tar in Producer Gas.* (Canadian Dept. of Mines Report; abstract).—Eng. News, Dec.5,1912; p. 1062; 6000 w*; 25c.

Hicks, Jas.—*The Laboratory Book of Mineral Oil Testing;* [with introduction by Sir Boverton Redwood].—London, 1912 (2d edition); 90c (book).

Höfer, H. v.—*Das Erdöl und seine Verwandten;* [Petroleum and related substances].—Chemiker u. Techniker-Zeitung, Nov.15,1912, p. 171 (first part); 1800 w; 35 cts.

Holde, Dr.—*Ueber gehärtete Oele;* [Solidified oil and oil products; read to Ver. Deu. Chemiker].—Petroleum, Sept.4, p. 1346; 800 w; 45c.

Hoppe, —. *Moderne Oelheizanlagen;* [Modern oil-burning equipment in foundries and smelting works].—Eisen Ztg., Aug.31,1912; p. 623; 1600 w; 35c.

Johnson, R. H.—*Shortage of Refinable Crudes;* [Summary of underground reserves of fuel and refinable crude oils in U. S.].— Natnl. Petroleum News, 1912, pp. 42-44; 50c.

Kermode, J. J.—*Oil Fuel;* [Read to Oil Congress, Olympia, 1912; discusses various uses].—Petroleum World, Sept.,1912; p. 382; 5400 w; 35c.

Klinger, O. C.—*The Age of Petroleum;* [Growth of industrial uses].—Oildom, Aug., 1912; p. 3; 2400 w; 35c.

Lane, F.—*Solution of the Question of Fuel for Diesel Engines.*—Petroleum World, Sept.,1912; p. 376; 1800 w; 35c.

Lemmer, A.—*Neues Destillationsverfahren für Stein- und Braunkohlenteer, Petroleumrückstände, etc.;* [New distillation process for coal and lignite tars, petroleum residues, etc.].—Bitumen, Nov.1, p. 322; 2400 w; 35c.

Liebenrood, F. H.—*Oil-Gas as a Heat Generator;* [Burden system and applications].—Petroleum World, Exhibn. No., Sept.,1912; p. 38; 3000 w*; 45c.

Neuburger, H.—*Approvisionnement des raffineries en matière brute;* [The provisioning of the refineries of Europe with crude oil, with special reference to Roumania (also Russia, Austria, etc.)].— Pétrole, Sept.1,1912; p. 5; Sept.15, p. —; 4000 w; 50c.

Potter, A. A.—*Heat Value of Liquid Fuels;* [Gasoline, kerosene, solar oil, alcohol].—Power, Sept.17,1912; p. 425; 500 w; 15c.

Pyhälä, E.—*Ueber die Naphthensäuren und ihre Reaktion mit Eisenoxydul;* [The naphtha acids and their reactions with ferrous iron].—Chemiker Ztg., July30,1912; p. 869; 2100 w; 35c.

Robertson, W. H.—*Supply of Fuel Oil in Peru.*—U. S. Consul. Rep., July17,1912; p. 302; 400 w; 20c.

Robertson, W. F.—*Experiments in Oil-Smelting in Br. Columbia;* [Boundary dis-

trict, copper at Van Anda furnace].—Met. & Cheml. Engg., Sept.,1912; p. 543; 800 w*; 35c.

Rosenthal, —. *Die Ursache der Explosionen von Benzintanks und deren Verhütung;* [Causes of explosions in benzine tanks, and their prevention].—Chem. Industrie, July15, 1912; pp. 444-447*; 50c.

Schmitz, L.—*Die flüssigen Brennstoffe;* [Liquid fuels, their production, properties and examination].—Berlin, 1912; 175 pp; 56 figs; $2.25 (book).

Seidenschnur, F.—*Die Gewinnung von Schmierölen nach altem und modernem Prinzip;* [Production of lubricating oils by old vs. new methods].—Petroleum, Aug.7, 1912; p. 1165-1176*; 45c.

Seidenschnur, F., and P. M. E. Schmitz.—*Die Gewinnung von Schmierölen;* [Production of lubricating oils, new methods and old; discussion of Seidenschnur's paper].—Petroleum, Sept.4, p. 1341; 1100 w; 45c.

Singer, L.—*Zur Gewinnung von Schmierölen;* [The production of lubricating mineral oils].—Petroleum, Sept.18, p. 1417; 2500 w; 45c.

Smith, A. E.—*Oil-Burning Locomotives in Canada;* [Canadian Pacific Ry., Nanaimo line].—U. S. Consul. Rep., July26,1912; p. 456; 300 w; 20c.

Sonnabend, W.—*Die Wirtschaftlichkeit der Oelheizung in der Hütten und Walztechnik;* [Industrial economy of oil fuel in smelters and rolling mills].—Centralbl. d. Hütten & Walzwerke, July15,1912; p. 372; 500 w; 35c.

Sonnabend, W.—*Oefen mit Rohölfeuerung in der Eisen-Industrie;* [French "Progress" crucible, burning crude oil].—Petroleum, July17,1912; p. 1121; 1000 w*; 45c.

Strohmeyer, C. E.—*Oil Fuel and Boiler Corrosion;* [Relative economies of oil engines, oil fuel, and coal-fired steam engines; report of Manchester Steam Users' Asso.]. —Iron & Coal Trades Rev., Nov.1, p. 706; 1100 w; 35c. Also in Electrician, Nov.1, p. 133; 4000 w; 35c. Also in Coll'y Guardn., Nov.8, p. 942; 2000 w; 35c.

Strong, R. M., and L. Stone.—*Comparative Fuel Values of Gasoline and Denatured Alcohol in Internal-Combustion Engines.*—U. S. Bur. Mines, Bull. 43, 1912; 243 pp.*; 20c.

Telford, T. McG.—*Is There Danger in Kerosene?* How to Handle and Test It Without Accident.—Oildom, Aug.,1912; p. 12; 1000 w; 25c.

Teodorin, J.—*Studien über die rumänische Erdölprodukte;* [Studies of the products of Roumanian petroleums].—Berlin Techn. Hochschule dissert., 1912; 53 pp; $1 (Thesis).

Titus, R.—*Heizöl- und Rohölfeuerung;* [Use of fuel oil vs. crude oil for fuel].—Allgm. Oestr. Chemiker Ztg., Aug.1,1912; p. 115; 1400 w; 45c.

Thompson, A. B.—*The Future of Liquid Fuel.*—Petroleum World, Exhibn. No., Sept., 1912; p. 27; 1200 w; 45c.

Tupper, C. A.—*Substituting Gas and Oil for Coal;* [Natural-gas firing of boilers at Fort Smith, Arkansas, power plant, with oil-burning auxiliary].—Power, July2,1912; p. 4; 1000 w*; 15c.

Venator, Wm.—*Ueber einen Schmelzofen mit Oelfeuerung;* [The Putensen oil burner for oil-fired smelting furnaces, and economy tests of oil firing for smelting].—Giesserei Ztg., June1,1912; p. 344; June15, p. —; 2000 w*; 65c.

Waters, C. E.—*Effect of Added Fatty and Other Oils upon the Carbonization of Mineral Lubricating Oils.*—U. S. Bur. Standards, Technologic Paper No. 4; 14 pp.; 1911; 50c.

Wesson, D.—*The Bleaching of Oils with Fuller's Earth;* [Read to Amer. Inst. Cheml. Engrs.].—Mining & Engg. World, Oct.12, p. 667; 2100 w; 10c.

Wiebe, H. F.—*Berücksichtigung der Fadenkorrektion bei der Temperaturbestimmung in den Mineralöl-Siedeapparaten;* [Capillarity correction in temperature determinations in oil distilling apparatus].—Petroleum, Sept.4, p. 1304; 1300 w; 45c.

B.—*Gefahrloser Umgang mit feuergefährlichen Flüssigkeiten;* [Experiments in the explosion of benzine and inflammable oils]. —Kohle & Erz, June17,1912; p. 629; June 24, p. 654; July1, p. 674; 5500 w*; 65c.

Dr. G.—*Oelfeuerungen für Metallurgische Zwecke;* [Application of oil-burning in metallurgy in Europe and America].—Petroleum, July17,1912; p. 1123; 1000 w*; 45c.

E. G.—*Die Entwickelung der rumänischen Petroleumraffinerie im letzten Jahrzehnt;* [Development of Roumanian refinery production in the last decade].—Allgm. Oestr. Chemiker Ztg., Sept.1,1912; p. 134; 200 w; table; 45c.

E. G.—*Erdöl-Filtrierung und Reinigung durch Erden;* [Fuller's earth and the filtration and purification of oils].—Allgm. Oestr. Chemiker Ztg., Aug.15,1912; p. 125; 1000 w; 45c.

"Petroleum."—*Advantages and Disadvantages of Liquid Fuel;* [from "Mechl. World"].—Petroleum World, Exhibn. No., Sept.,1912; p. 65; 2100 w; 45c.

"Petroleum."—*Advantages and Disadvantages of Liquid Fuel;* [Under boilers chiefly in naval use].—Mechl. World, Aug. 9,1912; p. 67; 2000 w; 35c.

———. *Das Heizöl in der Kriegsmarine;* [The use of oil fuel in the various navies]. —Petroleum, Oct.2, p. 12; 2400 w; 45c.

———. *Die rumänische Bahnen und das Petroleum;* [Development of oil burning on the Roumanian state railways].—Allgm. Oestr. Chemiker Ztg., Aug.1,1912; p. 118; 500 w; tables, 45c.

———. *Französisches Rühr- und Schöpfwerk für Destillationskessel zur Verarbeitung schwerer Mineralöle;* [French process for agitating and scooping heavy petroleums in distillation retorts].—Bitumen, Oct.1, p. 290; 1200 w*; 35c.

———. *Neuen Oelzerstäubern;* [Newer types of sprayers for oil burners].—Petroleum, May15,1912; p. 890; 2100 w*; 45c.

———. *Neuere Oelfeuerungen für Dampfkesselanlagen;* [Newer oil vaporizers and burning equipment for boiler plants].—Elektrotechn. Anzeiger, July18,1912; p. 727-729*; 45c.

———. *Neuerungen auf dem Gebiete der Petroleumbeleuchtung;* [Innovations in the domain of illumination by petroleum and products].—Petroleum, July13,1912; p. 1057; 4000 w*; 45c.

———. *The Oil Fuel Question;* [for navies].—Iron & Coal Trades Rev., Aug.2, 1912; p. 174; 1200 w; 35c.

———. *The "Selandia's" Consumption of Oil.*—Engnrg., Aug.30,1912; p. 302; 400 w; 35c.

———. *The Use of Fuel Oil in the Nitrate Fields of Chile.*—Peru To-Day, July, 1912; p. 201; 500 w; 25c.

———. *The Use of Fuel Oil on the Brit-*

ish Columbia Coast.—Canadian Engr., Nov. 14, p. 739; 800 w; 25c.

———. *Verbrauch an Brennstoffen verschiedener Art Russlands;* [Consumption of fuels in Russia].—Riga Industrie Ztg., May 31, p. 151; 1200 w; 35c.

———. *Zur Untersuchung von Oxydations-produkten des Petroleums:* [Examination of the polynaphthene acids derived from distilling or oxidizing oil with haloid salts; from "Neftyanoye Dyelo"].—Allgm. Oestr. Chemiker Ztg., Aug.1,1912; p. 117; 1000 w; 45c.

General and Miscellaneous

Adams, J. H.—*Approaching Era of Oil Power;* [Read to National Gas Asso., Milwaukee, 1912].—Oil Age, Aug.16,1912; p. 2, p. 5; 2500 w; 20c.

Bikoff, N. and G. von Doepp.—*Die internationale Ausstellung von Verbrennungsmotoren in St. Petersburg;* [The international exhibit of oil and combustion engines at St. Petersburg; reprinted from series of papers in "Gasmotorentechnik," 1911-1912].—Berlin, 1912; 52 pp*; $1.25.

Blauhorn, J.—*Das Recht der Rohölgewinnung in Oesterreich:* [Laws and regulations governing the petroleum industry in Austria; Vol. I: Laws and ministerial regulations; Vol. II: Mines Inspection regulations].—Vienna, 1912; pp. 150 and 101; $2 (books).

Bowie, C. P.—*Protecting Pipe Lines Against Alkali.*—Oil Age, July19,1912; p. 2; p. 6; 1600 w; 20c.

Conradson, P. H.—*Apparatus and Method for Carbon Test and Ash Residue in Petroleum Lubricating Oils.*—8th Internatnl. Congr. of Appl. Chem'y, 1912; Vol. 1, pp. 131-132.

Hautpick, E. de.—*Maikop Today; Impressions and Suggestions.*—Mng. Jnl., Sept. 28,1912; p. 943; 1200 w; 35c.

Hautpick, E. de.—*How the Russian Petroleum Market is Regulated.*—Mng. Jnl., Oct.5, p. 967; 2000 w; 35c.

Marcusson, J.—*Unterscheidung von Natur und Erdölasphalt;* [Distinction between natural and petroleum-asphalt].—Chemiker Ztg., July13,1912; p. 801; 3500 w; 30c.

Mencke, C.—*Die Geschäftsmethoden der Standard Oil Co.* [The business methods of Standard Oil].—Berlin, 1912; 208 pp*; $1 (book).

Mitzakis, M.—*The Oil Encyclopedia.*—Petroleum World, Suppl.; Aug.,1912; 8 pp; 35c.

Monasch, —.*Elektrische und Petroleumbeleuchtung;* [Cost comparison of electric vs. kerosene illumination].—E. T. Z., July18, 1912; p. 738-740*; 50c.

Muffelmann, L.—*Zum Petroleum Staatsmonopol in Deutschland;* [The projected state petroleum and oil monopoly in Germany].—Allgm. Oestr. Chemiker Ztg., June 15,1912; p. 89; 1400 w; 35c.

Ostrander, F. T.—*Distribution of Petroleum Products;* [Tank steamers and other methods].—Oil Age, Sept.6,1912; p. 6; 1800 w; 20c.

Pöhlmann, Ch.—*Neuere Rohölmotoren;* [Newer types of crude oil motors (Diesel engines)].—Berlin, 1912; pp. —; 175 figs.; 8 plates; $3 (book).

Requa, M. L. and others.—*Discussion on Proposed Legislation Concerning Government Restrictions in Disposing of Oil Lands;* [San Francisco section of Mng. & Met'g'l Soc. of America, May6,1912].—M. & M. Soc. of Amer., Bull. 49, June30,1912; pp. 125-138; 35c.

Schulz, W. H.—*Petroleum Competition in Red Sea Region.*—U. S. Consul. Rep., Sept. 10,1912; p. 1280; 400 w; 20c.

Schulze, E.—*Sicherheitsmassnahmen bei Tanks, System Dr. Flachs;* [Fire prevention in tanks containing inflammable liquids; the Flachs patented automatic quenchers].—Allgm. Oestr. Chemiker Ztg., Oct.15, p. 153; 1600 w*; 35c.

Singer, L.—*Ueber die Schmierung von Maschinenteilen;* [Theory of lubrication of machine parts; with review of lubricating devices].—Petroleum, Sept.4, pp. 1307-1320; 5000 w*; 45c.

Titus, R.—*Brandkatastrophen Verminderung;* [Fire in oil regions; measures of prevention and combating].—Organ d. Bohrtechniker, July16,1912; p. 157; 1500 w; 45c.

van Valkenburg, —. *A 1,250,000-acre Concession:* [Djambi concession in Sumatra placed open to bidding].—Petroleum World, Exhibn. No., Sept.,1912; p. 89; 1000 w; 45c.

E. G.—*Erdölgrubenbrände;* [Fire at the Concordia oil well, Moreni district].—Allgm. Oestr. Chemiker Ztg., July16,1912; p. 111; 300 w; 45c.

———. *Der Europäische Handel in Erdölprodukten 1911:* [Exports and imports of petroleum and oil products in U. S. and leading European countries, 1911; from Neftyanoye Dyelo].—Allgm. Oestr. Chemiker Ztg., July1,1912; p. 102; 1000 w; tables; 35c.

———. *Der Schutz der in Kalifornien gestreckten Pipe Line;* [Protection of pipe lines in California against alkali; from Petroleum Gazette].—Allgm. Oestr. Chemiker Ztg., Oct.15, p. 158; 1800 w; 35c.

———. *Die Benutzbarkeit ein und desselben Röhrenstanges für verschiedene Erdölsorten:* [Rumanian oils and the availability of the same pipe line for successive shipments of different kinds of oil].—Organ d. Bohrtechniker, June15,1912; p. 141; 500 w; 35c.

———. *Die neue rumänische Bergpolizeireglement:* [The new Roumanian mining regulations, with special reference to oil fields].—Allgm. Oestr. Chemiker Ztg., Sept. 15,1912; p. 137; Oct. 1, p. —; 3000 w; 75c.

———. *Die rumänische Petroleumausfuhr 1911:* [Roumanian oil exports, 1911; from "Moniteur du Pétrole Roumain"].—Allgm. Oestr. Chemiker Ztg., June15,1912; p. 93; 1500 w; 35c.

———. *Die rumänischen Missionen zum Studium amerikanischer und russischer Pipe Lines:* [Results of the Roumanian missions for the study of American and Russian pipe lines; from Monitr. du Pétrole Roumain].—Allgm. Oestr. Chemiker Ztg., Nov.1, p. 166; 1000 w; 45c.

———. *Die rumänische Petroleumindustrie im Jahre 1911:* [Roumanian petroleum production in 1911].—Allgm. Oestr. Chemiker Ztg., Aug.1,1912; p. 116; 1000 w; tables; 45c.

———. *Die Verkehrs- und Handelsvorschriften für das Petroleum in den einzelnen Ländern:* [The trade and commercial regulations for petroleum in different countries].—Petroleum, Oct.14,1912; p. 58; 7000 w; (first part); 60c.

———. *Fire Extinction by Frothy Mixtures:* [for combustible liquids].—E. & M. J., July,1912; p. 78; 600 w; 25c.

———. *Growth of Pacific Fleet of Oil Tank Steamers.*—Oil Age, July12,1912; p. 7; 14; 2000 w; 20c.

———. [In French and in German]: *Rapport sur les appareils "Perfect" pour l'extinction des incendies de substances liquides;* [The "Perfect" fire extinguisher for liquid inflammables].—Pétrole, Sept.1, p. 3; 500 w*; 35c.

———. *La Roumaine et le Monopole du Pétrole en Allemagne;* [Roumania and the petroleum monopoly in Germany] (from Moniteur du Petrole Roumain)].—Le Petrole, Nov.15,1912, p. 1; 1200 w; 25c.

———. *L'incendie des sondes pétrolifères de Moréni;* [The fire in the Moreni oil wells].—Rev. du Pétrole, May,1912; 4 pp.*; 75c.

———. *List of Tank Vessels;* [Registered at Lloyd's since 1907].—Petroleum World, Exhibn. No., Sept.,1912; pp. 48-49; 45c.

———. *Neue Lagereinrichtungen für feuergefährliche Flüssigkeiten;* [New devices for safe storage and handling of inflammable liquids].—Petroleum, Sept.4, p. 1361; 3000 w*; 45.

———. *Oil Pipe Lines are Common Carriers;* [Order of U. S. Commerce Commission, June13,1912].—E. & M. J., June22, 1912; p. 1216; 500 w; 25c.

———. *Pipeline Statistik der V. S.;* [Pipe-line runs and statistics, 2d quarter of 1912; eastern and central fields].—Petroleum, Aug.21, p. 1261; 1200 w; 35c.

———. *Petroleum Mining School;* [Proposed new courses at Univ. of Birmingham].—Mng. Jnl., July20,1912; p. 718; p. 726; 2000 w; 35c. Also discussed in U. S. Consul. Rep., Aug.1, p. 569; 400 w; 20c.

———. *Protecting Pipe Lines* [Against alkali, etc.].—Petroleum World, Exhibn. No., Sept.,1912; p. 80; 1400 w; 45c.

———. *Some New Pipe Lines and Parallels in Southern California.*—Oil Age, Aug.16,1912; p. 6; 1000 w; 20c.

———. *The Petroleum Expert; His Abilities, Limitations and Value.*—Mining & Engg. World, June22,1912; p. 1283; 1000 w; 10c.

NATURAL GAS

Barrows, G. S.—*Natural Gas; Its Production and Utilization.*—Nat. Gas Jnl., Nov.,1912; p. 532; 2500 w; 25c.

Brady, F. W.—*Rhigoline;* [Gasoline from natural gas in California].—Mines & Minerals, Nov., p. 224; 1600 w; 35c.

Breger, —. *Index to Oil Literature.*—See under "Petroleum and Oils."

Burrell, Geo. A.—*Natural Gas Investigations of U. S. Bureau of Mines.* (Paper read before the Natural Gas Assn. of Am.).—Nat. Gas. Jnl., Dec.,1912; p. 589; 35c.

Abstract in Oil Age, June14,1912; p. 2, 6, 10; 2500 w; 20c.

Burrall, G. A.—*Liquified Natural Gas;* [Discussion before Nat. Gas. Asso., Kansas City, 1912].—Nat. Gas Jnl., Aug.,1912; p. 376; 1600 w; 25c.

Fauck, A.—*Eine Gasexplosion in Siebenburgen;* [The natural gas explosion near Kissarmas, Transylvania].—Oestr. Zts. f. Berg- & H-wesen, May11,1912; p. 265; 600 w; 45c.

Fullerton, A.—*Natural-Gas Belt in Western Canada;* [Alberta].—Mining & Engg. World, Oct.12, p. 670; 800 w*; 10c.

Gould, C. N.—*The Geology of Natural Gas.*—Nat. Gas Jnl., Oct.,1912; p. 488; 3700 w; 35c.

Abstract in Oil Age, July5,1912; p. 7; p. 9; July12,, p. —; 5000 w; 30c.

Hays, V. A.—*On "Depreciation of Natural Gas Properties."*—Nat. Gas Jnl., Sept. 1912; p. 429; 2700 w; 25c.

Heath, C. R.—[*Development of Natural Gas Business in Muncie District, Indiana*].—Nat. Gas. Jnl., July,1912; p. 322; 4000 w; 25c.

Herbing, —.*Die Erdgasquelle bei Kissärmäs in Siebenbürgen;* [The natural-gas springs of Kissarmas, Transylvania].—Braunkohle, Aug.9,1912; pp. 289-293*; 50c.

Hildebrand, H. D.—*Gas Compressed by Steam Power;* [In eastern U. S.; read to Nat. Gas Asso., May,1912].—Nat. Gas Jnl., July,1912; p. 313; 8000 w; 25c.

Hirshfeld, C. F.—*Production of Gasoline from Natural Gas.*—Engg. Mag., Sept., 1912; pp. 880-889*; 35c.

Jessen, A., V. Milthers, and N. Hartz.—*En boring gennem de kvartaere Lag ved Skaerumhede;* [Test boring for natural gas at Vendsyssel].—Odensee, 1911; 180 pp* (with English summary); $1.50 (book).

Jones, L. B.—*Welding of High-Pressure Pipe Lines;* [Natural gas and oil].—Jnl. of El'y Power & Gas, Sept.21,1912; p. 257; 3000 w*; 35c.

Kay, F. H.—*The Carlinville Oil and Gas Field, Illinois.*—Ill. Geol. Survey, Bull. 20; 1912; pp. 39-50*; 50c.

Knapp, I. N.—*Natural Gas, with Incidental Reference to Other Bitumens.*—Jnl. Fr. Inst., Nov.,1912; 22 pp*; 75c.

Knapp, I. N.—*Extraction of Gasoline and other Products from Natural Gas;* [Report of research committee of Nat. Gas Asso., May,1912].—Nat. Gas Jnl., July,1912; p. 311; 1000 w; 25c.

Leland, E. D.—*Compressing Natural Gas.*—Engrs. Soc. of W. Penn., Proc.; June, 1912; 62 pp.*; 65c.

Lent, L. B.—*Burning Natural Gas under Boilers.*—Power, Oct.22, p. 597; 1000 w; 15c.

Lippincott, S. R.—*Oil and Gas East of the Mississippi in Louisiana, Mississippi, and Alabama.*—Nat. Gas Jnl., Nov.,1912; p. 528; 1400 w; 25c.

Mahin, F. W.—*Natural Gas in Holland.*—U. S. Consul. Rep., Sept.30, p. 1647; 200 w; 20c.

Martin, A. H.—*Commercializing Natural Gas in California.*—Mining & Engg. World, Sept.28,1912; p. 568; 1400 w; 10c.

McCandless, John M.—*The Value of Peat as a Filler and a Fertilizer.* (Paper read before Georgia Fertilizers Assn.; abstract).—Am. Fertilizer, Nov.30,1912; p. 44; 2500 w; 35c.

McDowell, J. C.—*Report of Committee on Conservation of Natural Gas;* [Nat. Gas Asso., May,1912].—Nat. Gas Jnl., July,1912; p. 312; 500 w; 25c.

Miller, Wm. A.—*Natural Gas Transmission and Distribution;* [Cincinnati district].—Compr. Air Mag., Sept.,1912; p. 6563; 500 w; 25c.

Münichsdorfer, F.—*Die Gas- und Schwefelbrunnen im bayerischen Unterinngebeit;* [Gas and sulphur springs of lower Bavaria].—Geogn. Jahresh., 1911, pp. 233-257*; 75c.

Neale, A.—*Gas Wells Through Mine Workings;* [Discusses practice in Pennsylvania, and dangers].—Coal Age, June29, 1912; p. 1255; 750 w; 20c.

Peterson, F. P.—*Petrol from Oil-Well*

Gas.—Petroleum World, Exhibn. No., Sept., 1912; p. 44; 2400 w*; 45c.

Peterson, F. P.—*Producing Gasoline from Natural Gas.*—Power, Nov.5, p. 679; 1000 w; 15c.

Phillips, S. U.—*Gas and Oil Wells in Minsylvania Regions;* [Reviews accidents in Pennsylvania, and precautions].—Coal Age, July 27,1912; p. 129; 750 w; 20c.

Richards, T. W. and others.—*Compressibilities of Certain Hydrocarbons, Alcohols, Esters, Amines, and Organic Halides.*—Amer. Cheml. Soc., Jnl.; Aug.,1912; pp. 971-992*; 65c.

Smith, J. T.—*New Product from Oil Wells;* [Liquid gas, gasoline].—Petroleum World, June,1912; p. 256; 1000 w; 35c.

Snelling, W. O.—*Liquified Natural Gas;* [Read to Amer. Cheml. Soc., Pittsburgh section].—Compr. Air Mag., Sept.,1912; p. 6555; 2000 w; 25c.

Stopnewitsch, A.—*Erdgas zu Stawropol, Nordkaukasus;* [Natural gas at Stavropolis, North Caucasia].—Organ d. Bohrtechniker, Nov.1, p. 249; 2100 w; 45c.

Strong, R. M., and L. Stone.—*Comparative Fuel Values of Gasoline and Denatured Alcohol in Internal-Combustion Engines.*—U. S. Bur. Mines, Bull. 43, 1912; 243 pp.*; 20c.

Tupper, C. A.—*Substituting Gas and Oil for Coal;* [Natural-gas firing of boilers at Fort Smith, Arkansas, power plant, with oil-burning auxiliary].—Power, July2,1912; p. 4; 1000 w*; 15c.

Walker, P. F.—*Utilizing Natural Gas;* [Metering and efficiency; from Univ. of Kansas Bull., July1,1912].—E. & M. J., Oct.26, p. 780; 750 w; 25c.

Waring, C. H.—*Detection of Leaks in Commercial Gas Mains When Natural Gas is Being Distributed;* [Read to Nat. Gas Asso., Kansas City, 1912].—Nat. Gas Jnl., Aug.; p. 383; 2100 w; 25c.

Wood, R. H.—*Oil and Gas Developments in North Central Oklahoma.*—U. S. Geol. Survey, Bull. 531-B; 1912; 31 pp.*; 10c.

Young, G. A.—*Geology of the Moncton Map Area, Westmoreland and Albert Counties, N. B.;* [Chiefly oil and gas].—Canada Geol. Survey, Rep. f. 1911; 1912; pp. 309-322.

———. *Compressing Natural Gas;* (Proc. Eng. Soc. Western Pennsylvania; abstract).—E. & M. J., Nov.23,1912; p. 991; 2300 w; 25c.

———. *Gasquellenbrand in Kissarmas;* [Natural gas developments at Kissarmas, Hungary; and on some fired gas wells].—Allgm. Oestr. Chemiker Ztg., Sept.1,1912; p. 134; 600 w; 45c.

———. *Occurrences of Natural Gas in Europe.*—Mng. Jnl., Nov.9, p. 1104; 600 w; 35c.

———. *Prices of Natural Gas;* [In the various states, 1909 and 1910].—Mining & Engg. World, June22,1912; p. 1292; 100 w; table; 10c.

———. *The Gas Fields of New Brunswick;* [Developments near Moncton].—Canadian Mng. Jnl., Aug.15,1912; p. 537; 600 w; 25c.

———. *Washington and Terrebonne Parishes, La., as Possible Natural Gas Fields.*—Nat. Gas Jnl., Aug.,1912; p. 364; 365; 1600 w; 25c.

———. *Without a Coal Pile;* [Electric power plant, Shreveport, La., using natural gas to raise steam.—Practl. Engr., Oct.15, 1912; p. 1021; 1500 w*; 25c.

PEAT

Anrep, A.—*Investigation of Peat Bogs in 1911.*—Canada Dept. Mines, Mines Branch Rep. f. 1911; 1912; p. 55; 500 w; 50c.

Bartel, —. *Die Verwendung geringwertiger Brennstoffe zur einheitlichen Versorgung Deutschlands mit elektrischer Energie;* [Use of low-grade fuels—coal, lignite, and peat—for producing electric power in Germany; costs per kw.-hour].—E. T. Z., July 11,1912; pp. 705-709*; 50c.

Davis, C. A.—*The Production of Peat in 1911;* [Developments in U. S.].—U. S. Geol. Surv., Mineral Resources for 1911; 1912; 6 pp.; 20c.

Davis, C. A.—*Recent Progress in Preparing Peat for Fuel.*—Amer. Peat Soc., Jnl.; No. 2, 1912; p. 70; 4000 w; $1.35.

Gladding, T. S.—*Peat as an Agricultural Asset.*—Amer. Peat Soc., Apr.,1912; pp. 1-9; $1.45.

Glöckner, F. — *Das Volumenverhältnis zwischen Moortorf und daraus resultierender autochthoner Humusbraunkohle;* [Volume relations between peat and the humus-lignites resulting autochthonously therefrom].—Zts. f. prakt. Geol., Sept.,1912; pp. 371-374; 75c.

Haanel, B. F.—*Report on the Utilization of Peat Fuel for the Production of Power;* [Experiments at Ottawa government testing station].—Canada Dept. Mines, Mines Branch Paper No. 154; 140 pp*; 50c.

Haanel, B. F.—*The Peat Producer-Gas Power Plant at the Government Fuel-Testing Station, Ottawa, Canada.*—Amer. Peat Soc., Jnl.; No. 2, 1912; p. 84; 2200 w*; $1.35.

Haanel, B. F.—*The Production and Utilization of Peat for Power Purposes.*—8th Internatnl. Congr. of Appl. Chem'y, 1912; Vol. 10; pp. 159-185.

Abstract in Engg. Record, Oct.5, p. 373; 600 w; 20c.

Hoff, J. N.—*Some Aspects of Florida Peat Bogs.*—Amer. Peat Soc., Jnl.; Apr., 1912; p. 26-29; $1.35.

Krupp, L. A.—*An Automatic Peat Fuel Producing Plant.*—Amer. Peat Soc., Jnl.; Apr.,1912; p. 31; 1600 w*; $1.35.

Lincoln, L. B.—*An Up-to-Date Peat Plant;* [Reviews requirements in America].—Amer. Peat Soc., Jnl.; Apr.,1912; p. 18-25; $1.35.

Mashek, G. J.—*Peat Briquetting.*—Amer. Peat Soc., Jnl.; Apr.,1912; p. 10-16; $1.35.

McWilliam, J.—*Power from Powdered Peat.*—Amer. Peat Soc., Jnl.; No. 2, 1912; p. 102; 800 w; $1.35.

Moore, E. V.—*Recent Developments in Peat Machinery.*—Amer. Peat Soc., Jnl., No. 2, 1912; p. 95; 2500 w; $1.35.

Patten, A. J.—*Peat Bogs in Michigan, from an Agricultural Point of View;* [Use as fertilizer and filler].—Amer. Peat Soc., Jnl.; No. 2, 1912; p. 65; 1800 w; $1.35.

Pegg, H. V.—*Commercial Utilization of Peat for Power Purposes* [at Portadown, Ireland; read to Instn. of Mechl. Engrs. (British), Belfast, July,1912]. — Coll'y Guardn., Aug.9, p. 282; 2000 w; 35c. Also in Iron & Coal Trades Rev., Aug.9, p. 207; 2000 w; 35c.

Phillips, H.—*Nitrogen in Peat Humus.*—Amer. Peat Soc., Jnl., No. 2, 1912; p. 101; 600 w; $1.35.

Thaulow, J. G.—*Torvindustrien, ved aarskiftet;* [Review of the peat industry for 1911].—Teknisk Ugeblad, No. 9, 1912; p. 117-118; 75c.

Van Glahn, J. H.—*Excavation of Peat by Vacuum Pump.*—Amer. Peat Soc., Jnl., No. 2, 1912; p. 80; 1200 w; $1.35.

Wallgreen, E.—*Itvilka utsikter finnas for almän Användning af det Ekelsundska torfpulver till generering af ana;* [Possibilities of the general adoption of Ekelsund's peat powder for generating steam].—Teknisk Tidskr., No. 3, 1912; pp. 8-16; 75c.

———. *Fuel Alcohol from Peat.*—Amer. Peat Soc., Jnl.; Apr.,1912; p. 38; 800 w; $1.35.

———. *Peat Fuel in Central Russia.*—Engnrg., Nov.8, p. 661; 500 w; 35c.

———. *Peat Production;* [Methods; recent developments in Quebec; power production].—Canadian Mng. Jnl., July15, 1912; p. 491; 2000 w*; 25c.

———. *Verbrauch an Brennstoffen verschiedener Art Russlands;* [Consumption of fuels in Russia].—Riga Industrie Ztg., May 31, p. 151; 1200 w; 35c.

FUELS IN GENERAL

Jesse, R. H., jr.—*Some Tests of a New Calorimeter Bomb;* [New Parr nickel-copper-chromium bomb tests; read to 8th Internatnl. Congr. of Appl. Chem'y].—Jnl. of Ind'l & Engg. Chem'y, Oct.,1912; p. 748; 1200 w*; 65c.

Parr, S. W.—*A New Calorimeter Bomb with Special Advantages as to Material of Construction and Method of Operation;* [Read to 8th Internatnl. Congr. of Appl. Chem'y].—Jnl. of Ind'l & Engg. Chem'y, Oct.,1912; p. 746; 2000 w*; 65c.

CHAPTER X.

Structural and Ceramics.

STONE; SAND; GRAVEL

Austett, F.—*New Appliances of the Municipal Laboratory of Paris for Testing Stone Paving Blocks;* [from Internatnl. Asso. f. Testg. Materials, Proc.. for Sept., 1912].—Engg. & Contractg., Aug.21,1912; p. 204; 8000 w; 20c.

Buderus, C.—*Prüfung und Bewertung des Formsandes;* [Testing and judging molding-sands].—Giesserei Ztg., Oct.15, p. 629; Nov.1, p. —; 2000 w; 50c.

Burchard, E. F.—*The Production of Glass Sand, Other Sand and Gravel in* 1911.—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 56 pp.; 10c.

Burchard, Ernest F.—*The Stone Industry in* 1911.—Adv. Chap. Min. Res., 1911, U. S. Geol. Surv., pp* 96.

Condit, D. D.—*Mineral Characters of the Molding Sands.*—Amer. Foundrym. Asso., Trans.; Vol. 21; 1912; pp. 19-52*; 50c.

Dalmas, F. A.—*The Carrara Marble Industry.*—U. S. Consul. Rep., July29,1912; p. 497-503; 20c.

Deedmeyer, F.—*Carrara Marble Exports;* [Carrara Chamber of Commerce figures for 1911].—U. S. Consul. Rep., July5, 1912; p. 75; 250 w; 20c.

Denis, T. C.—*Annual Report, Quebec Dept. of Mines for* 1912.—See Quebec.

Denker, Wm. — *Unfallverhütung bei Sprengarbeiten in Steinbrüchen;* [Accident prevention in blasting and the handling of explosives in quarries; with special reference to the commoner explosives and exploders, and legal regulations].—Berlin, 1912 (2d edition); 205 pp.; $1 (book).

Eckel, Edward C.—*The Effect of Cement Competition on the Stone Industry.*—Eng. News, Dec.5,1912; p. 1045; 4000 w; 25c.

Franchi, S.—*Sulla distinzione fra graniti e gneiss dal punto di vista tecnico-industriale;* [Distinction between granite and gneiss from the tecnico-industrial viewpoint; from Soc. Geol. Ital., Bol., pp. 1051-1067].—Rassegna Mineraria, Sept.1,1912; p. 118; Sept.11, p. —; 5000 w; 50c.

Gäbert, C.—*Die technisch nutzbaren Gesteine des Königreichs Sachsen;* [The technically useful stones of Saxony].—Steinbruch, 1912; pp. 72-82; 75c.

Gassier, —. *Comparative Mechanical Strengths and the Stabilities in Sea-Water of Crushed-Sand Mortars and Sea-Sand Mortars.*—Internatnl. Asso. f. Testg. Materials, Vol. II, No. 11; 1912; 12 pp*; 95c.

Goldbeck, A. T. and F. M. Jackson.—*The Physical Testing of Broken-Stone Railroad Ballast.*—Internatnl. Asso. f. Testg. Materials, Vol. II, No. 13; 1912; 15 pp.*; 95c.

Gordon, C. H.—*Cave Marble (Cave Onyx) in Tennessee.*—Resources of Tenn., Aug.,1912; pp. 307-317*; 35c.

Hanisch, A., R. Oebbeke, J. A. Howe, and others.—*Weathering Resistance of Building Stones;* [Report of committee 7].—Internatnl. Asso. f. Testg. Materials, Vol. II, No. 11; 1912; 25 pp; 95c.

Hill, R. T.—*Marble deposits of the Inyo Mountains, California.*—M. & S. P.. July 20,1912; p. 86; 1500 w; 20c.

Kloes, J. A. van der.—*Influence of the Composition of Mortar and the Quality of the Stones Upon the Durability of Masonry.*—Internatnl. Asso. f. Testg. Materials, Vol. II, No. 11; 1912; 9 pp; 95c.

Labordère, P. and F. Anstett.—*Note on Appliances for Testing Paving Setts;* [Paris municipal equipment].—Internatnl. Asso. f. Testg. Materials, Proc.; Vol. II, No. 10; 1912; 5 pp*; 95c.

Lang, R.—*Uebersicht über die Bildungsweise und chemische Wetterbeständigkeit der Sandsteine;* [Genesis and chemical resistance to weathering of sandstones].—Steinbruch, 1912; pp. 187-189; 197-199; 212-213; 222-223; 95c.

Lotz, H.—*Die Verwitterung einiger gesteinsbildenden Mineralien unter dem Einfluss von schwefliger Säure;* [The weathering of various rock forming minerals under the influence of sulphurous acids].—Giessen dissert; 1912; 108 pp*; $1.50 (Thesis).

Loudenbeck, H. C.—*Molding Sand Tests;* [The Microscope as a Testing Medium for Molding Sand].—Amer. Foundrym. Asso., Trans.; Vol. 21; 1912; pp. 53-83*; 50c.

Lovegrove, E. J.; J. S. Flett, and J. A. Howe.—*Attrition Tests of Road-Making Stones.*—London, 1912; 80 pp*; $1.75 (book).

Maynard, T. P.—*Limestones and Cement Materials of North Georgia.*—Ga. Geol. Survey, Bull. No. 27; 1912; 293 pp.*; 35c.

McBride.—*British Columbia Mines Report for* 1911.—See under B. C.

McLeish, John.—*The Production of Cement, Lime, Clay Products, Stone and Other Structural Material in Canada,* 1911. (Bull. 181, Canada Dept. of Mines.) 55 pp; 35c.

Mesnager, A., and others.—*Principles of Unified Tests on Road-Making Materials;* [With description of practice in Germany, by H. Burchartz and B. Stock; Austria, by A. Hanisch; Belgium, by E. Camerman; Denmark, by H. I. Hannover; Hungary, by E. Fock; Norway, by M. Skougard; Netherlands, by M. E. H. Tjaden].—Internatnl. Asso. f. Testg. Materials, Vol. II, No. 13; 42 pp.; 50c. Abstract in Engg. & Contractg., Sept. 11, p. 293; 7000 w; 20c.

Meuskens, Clemens.—*Entwickelung und Stand der heutigen Stein- und Kalisalzaufbereitung, III;* [Development and status of modern stone and potash-salt preparation].—Kali, Nov.1,1912; p. 540; 4500 w*; 35c.

Nelson, W. A.—*Some Building Sands of Tennessee.*—Resources of Tenn., Oct.,1912; pp. 389-397*; 35c.

Owen, J.—*Maintenance of Roads and Pavements;* [Read to Amer. Road Builders' Asso.; abstract].—Canadian Engr., Aug.22,1912; p. 344; 3500 w; 25c.

Page, L. W.—*Roads, Paths, and Bridges.*—N. Y., 1912; 263 pp*; $1 (book).

Page, L. W.—*Physical Testing of Rock for Road Building, Including the Methods Used and the Results Obtained.*—U. S. Office of Public Roads, Bull. 44, 1912; 96 pp.*; 25c. Abstract in Municipal Jnl., Aug. 22, p. 247; Aug.29, p. 287; 2200 w*; 40c.

Parks, H. M.—*Rocks as Related to Highway Construction.*—Pacific Builder & Engr., Aug.3,1912; 4 pp*; 25c.

Parks, W. A.—*The Building and Ornamental Stones of the Maritime Provinces.*—

Canada Dept. of Mines, Mines Branch, Rep. f. 1911; 1912; pp. 84-86.

Parks, Wm. A.—*Report on the Building and Ornamental Stones of Canada; Volume* 1.—Canada Dept. of Mines, Mines Branch Publ. No. 100; 375 pp.*; 50c.

Petersen, Wm.—*Our National Road Materials.*—Pacific Builder & Engr., Aug.3, 1912; 2 pp; 25c.

Schmidt, A.—*Technisch nutzbare Gesteine aus der Trias des württembergischen Schwarzwalds und seine Vorlandes;* [Technically useful rocks of the Würtemberg Black Forest region].—Steinbruch, 1912; pp. 48-49; 60-61; 75c.

Searle, A. B.—*Physical Properties of Molding Sands;* [Abstract from "Mechl. Engr."].—Engg. Mag., Oct.,1912; p. 103; 2000 w; 35c.

Traylor, S. W.—*Crushing Plant for the Construction of the Kensico Dam;* [500 cu. yds. per hour for dam containing 1,000,000 cu. yds. of masonry; Blake jaw crushers and rolls].—Engg. & Contractg., Aug.28, 1912; p. 231; 2100 w*; 20c. Also in Mining & Engg. World, Feb.24,1912; p. 451; 3000 w*; 10c.

Valiquette, J. H.—*Report on the Montreal Quarries.*—Quebec Dept. Mines Rep. f. 1911; 1912; pp. 52-70*; 75c.

Amer. Inst. of Metals.—*Molding Sand Tests;* [Transverse strength; crushing strength; permeability to air; clay bond].—Amer. Foundrym. Asso., Proc. f. Sept., 1911; pp. 99-125; 75c.

National Federation of Slate Merchants, Slaters & Tilers.—20th Annual Congress.—Slate Trade Gazt., June,1912; p. 83; 2000 w; 35c.

———. *A New Gravel Washing Screen;* [Dull & Co. system].—Rock Products, Aug., 1912; p. 44; 500 w*; 30c.

———. *A 3000-yd. Washing Plant;* [World's largest gravel-washery at Rockdale, near Joliet, Ill.].—Rock Products, Oct. 22, p. 44; 1000 w*; 30c.

———. *Economical Sand and Gravel Plant;* [Bucket-conveyors and cheap handling at Vancouver, B. C.].—Rock Products, Sept.,1912; p. 41; 3500 w*; 30c.

———. *Electricity in Stone-Cutting Plants;* [Disc saws, planers, cranes, etc., in sandstone plant of J. Tait Stone Co., Chicago].—El. Rev. (Chicago), Aug.17, 1912; p. 295; 3000 w*; 20c.

———. *Esportazione di marmo ed alabastro e solfo,* 1910, 1911; [Italian exports of marble, alabaster, and sulphur in 1910 and 1911].—Rassegna Mineraria, July21, 1912; p. 40; tables; 35c.

———. *Examination and Classification of Rocks for Road Building.*—U. S. Office of Public Roads, Bull. 37, 1912; 25c.

———. *Gravel Washing and Crushing Plant;* [Ohio Ballast Co., Columbus, O.].—Engg. Record, Oct.12, p. 404; 2000 w*; 25c.

———. *Gravity Yard for a Ballast-Crushing Plant;* [near Piedra, Cal.].—Engg. Record, June22,1912; p. 695; 1000 w; 25c.

———. *Hauling Sand and Gravel with a Motor Truck.*—Engg. Record, Oct.26, p. 473; 800 w*; 20c.

———. *Keeping Costs in Quarry Work.*—Stone Trades Jnl., July,1912; p. 25; 1800 w; 35c.

———. *Molding Sand Tests;* [Discuss.; rational methods].—Amer. Foundrym. Asso., Trans.; Vol. 21; 1912; pp. 85-97*; 50c.

———. *New Gravel-Washing Process;* [R. W. Dull scrubbing-cylinder system].—Rock Products, Oct.22, p. 43; 200 w*; 30c.

———. *New York's Special Granite Pavement.*—Municipal Jnl., Oct.10, p. 525; 1500 w*; 25c.

———. *Road Improvement and Road Materials in Tennessee.*—Resources of Tenn., Oct.,1912; p. 398; 600 w; 35c.

———. *The Greatest Quarry in the World;* [Penrhyn, Wales, slate quarries].—Stone, July,1912; p. 358; 1500 w; 35c.

———. *The Marble Industry in Quebec.*—Canadian Mng. Jnl., July1,1912; p. 446; 1000 w*; 25c.

———. *The Moqattam Hills;* [Quarry industry which furnished the stones for the Pyramids].—Indian & Eastn. Engr., Aug., 1912; p. 83; 1000 w*; 35c.

———. *The Reduction of Slate Waste;* [Various uses].—Slate Trade Gazt., Oct., 1912; p. 168; 1600 w; 35c.

Molding Sands

Holicky, J.—*Studie über Halberstädter Formsand;* [The molding sands of Halberstädt, Germany; read to Ver. Deu. Giessereifachleute].—Giesserei Ztg., Sept.1,1912; p. 525; Sept.15; 3000 w*; 50c.

———. *Das Prüfen von Formsand;* [The testing of molding sand].—Eisen Ztg., Sept. 7,1912; p. 640; Sept.14, p. —; 1300 w; 45c.

CEMENT

Anderson, G. E., and S. K. Lupton.—*Cement Production and Trade of the Far East;* [China and India].—U. S. Consul. Rep., June21,1912; p. 1238; 600 w; 20c.

Barth, J. — *Zerfressene Zementrohre;* [Corrosion in the cement lining of the Schönebeck drainage tunnel].—Ton-Industrie, July6,1912; p. 1081; 1400 w*; 35c.

Barth, J. — *Zerfressene Zementrohre;* [Corrosion of cement pipes and tunnel lining].—Ton Industrie Ztg., Aug.31,1912; p. 1415; 1000 w*; 35c.

Barth, J.—*Wie macht man das Zementrohr wettbewerbsfähiger;* [Industrial competition between clay and cement piping].—Ton Industrie Ztg., Oct.26, p. 1700; 1000 w*; 35c.

Bernus, S.—*Sur la fabrication du ciment et spécialement dans le bassin calcaire du Tournaisis;* [Notes on cement manufacture in the Tournaisis region, Belgium].—Etudiants Inst. Meurice, Bull.; No. 1, 1912; pp. 41-68; pp. 95-104.

Bertelli, L.—*Cementi e Calci Idrauliche;* [Cements and Hydraulic Limes].—Milan, Italy; 1912; 573 pp; 44 plates; $3 (book).

Bied, J.—*On the Testing of Hydraulic Binding Media;* [Investigation of hot water test and le Chaterlier needle cylinder apparatus].—Internatnl. Asso. of Testg. Materials, Bull. 9, June,1912; 12 pp.*; 90c.

Bied, J.—*On Various Chemical Phenomena Encountered in the Course of Industrial Investigations;* [Dehydration temperatures, free lime, silica-lime combinations at 1000° C., fused cements].—Internatnl. Asso. f. Testing Materials, Bull. 9, June,1912; 8 pp.; 90c.

Bleininger, A. V., E. F. Lines, and F. E. Layman.—*Portland Cement Resources of Illinois;* [Includes description of manufacturing processes, costs, testing, etc.].—Ill. Geol. Survey, Bull. 17; 1912; 119 pp*; $1.

Blount, B.—*Accelerated Constancy-of-Volume Tests of Cements.*—Internatnl.

Asso. f. Testing Materials, Bull. 9, June, 1912; 8 pp.; 90c.

Brown, W. L.—*Destruction of Cement Pipe by Alkali.*—Brick. Oct.1,1912; p. 267; 1200 w; 20c.

Burchard, E. F.—*The Cement Industry in the United States in* 1911; [N. J., Penn., Ohio, N. Y., Mich., Indiana, Ky., Md., W. Va., Va., Ala., Ga., Tenn., Ill., Iowa, Kans., Mo., Okla., Tex., Colo., Utah., Mont., Ariz., Cal., Wash.; bibliography].—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 37 pp; 10c.

Burnett, F. C. E.—*Electricity in the Portland Cement Industry;* [Motors, wiring, equipment and installation in limestone quarries; skip-hoists, grinding mills, etc.].—Amer. Inst. of El. Engrs., Proc., Sept.,1912; pp. 1817-1836*; $1.15.

Burlton, C. H. B.—*Magnesian Cement in India.*—Roy. Soc. of Arts, Jnl.; July26, 1912; p. 851-864; 9000 w; 35c.

Camerman, M.—*Sur les essais d'invariabilité de volume;* [Volume-constancy test of cement; read to Internatnl. Asso. f. Testing Materials, French-Belgian section].—Rev. d. Materiaux, June,1912; p. 67; 1800 w; 65c.

Candlot, E.—*The Progressive Increase in the Strength of Cement Mortars.*—Internatnl. Asso. f. Testg. Materials, Proc.; Vol. II, No. 10; 1912; 4 pp; 95c.

Charles, F.—*L'évolution des procédés de fabrication du ciment Portland en Amérique;* [Evolution of Portland cement manufacturing in America; notes on McKenna's work].—Rev. d. Matériaux, Oct.,1912; p. 117; 5000 w*; 45c.

Coker, E. G.—*The Distribution of Stress at the Minimum Section of a Cement Briquette.*—Internatnl. Asso. f. Testg. Materials, Proc.; Vol. 2, No. 10; 1912; 13 pp*; 95c.

Cowles, A. H.—*Alumina, Hydrochloric Acid, Alkalis, and White Hydraulic Cement from Clay, Salt and Lime.*—See Aluminum.

Cushman, A. S.—*Notes on a Study of the Temperature Gradients of Setting Portland Cement;* [Read to 8th Internatnl. Congr. of Appl. Chem'y].—Jnl. of Ind'l & Engg. Chem'y, p. 728; 1800 w*; 65c.

Dormann, O. — *Silica in Rotary-Kiln Portland Cement;* [Translated from Zts. f. Angew. Chemie].—Engnrg., July5,1912; p. 27; 1500 w; 35c.

Dunstan, B.—*Portland Cement Materials in Queensland.*—Qu. Govt. Mng. Jnl., July, 1912; p. 320; 1000 w; 35c.

Duryee, Edw.—*Further Investigations of Puzzolan-Portland Cements.*—Engg. News, Aug.15,1912; p. 297; 2100 w*; 25c.

Eckel, Edward C.—*The Effect of Cement Competition on the Stone Industry.*—Eng. News, Dec.5,1912; p. 1045; 4000 w; 25c.

Feret, M.—*Sur la méthode d'essai de M. H. le Chatelier;* [The le Chatelier test; read to Internatnl. Asso. f. Testing Materials, French-Belgian section].—Rev. d. Matériaux, June,1912; p. 69; 3500 w; 75c.

Feret, R.—*The Testing of Cements by Le Chatelier's Method.*—Cement, May,1912; p. 11; 2400 w; 35c.

Feret, R.—*Air-Sifting as a Method for the Quantitative Determination of the Finest Particles Contained in Pulverulent Materials.*—Internatnl. Asso. f. Testg. Materials, Vol. II, No. 11; 1912; 15 pp*; 95c.

Gary, M.—*Determination of the Simplest Method for the Separation of Finest Particles in Portland Cement.*—Internatnl. Asso. f. Testg. Materials, Vol. II, No. 11; 1912; 3 pp; 95c.

Glasenapp, M.—*Technische Bedingungen für die Abnahme von Portlandzementen in Russland;* [Specifications for the supply of Portland cements to the Russian ministry of public works].—Riga Industrie Ztg., May 15,1912; p. 132; May30, p. 148; 4000 w*; 50c.

Gary, M.—*Strength-Testing and the Use of Prisms Made of Plastic Mortar.*—Internatnl. Asso. f. Testing Materials, Bull. 9, June,1912; 15 pp.*; 90c.

Gary, M.—*Accelerated Constancy-of-Volume Test in Portland Cements.*—Internatnl. Asso. f. Testing Materials, Bull. 9, June, 1912; 10 pp.; 90c.

Hadley, H. F. and D. F. McFarland.—*The Use of the Higher Phenols in Testing for Free Lime in Portland Cement.*—8th Internatnl. Congr. of Appl. Chem'y, 1912; Vol. 5, pp. 83-90.

Hentschel, G.—*Technische Prüfung von Zement;* [Technical testing of cement; determination of silica and sulphuric acid].—Chemiker Ztg., July18,1912; p. 821; 800 w; 35c.

Jean, E.—*Cuisson de Chaux Pures;* [Burning of pure limes] (last part).—Revue des Matériaux de Construction et de Travaux Publics.—Nov.,1912, p. 136; 1300 w*; 75c.

Kallauner, O.—*Portlandzement und Magnesiumsalze;* [Effect of magnesium sulphate and other magnesium salts on Portland cements].—Ton Industrie Ztg., Aug.17, p. 1335; Aug.24, p. 1377; 3200 w; 50c.

Kasai, S.—*Portlandzement mit Puzzolanzusatz;* [Portland cement with puzzuolan addition, and the problem of sea-water corrosion].—Berlin, 1912; 48 pp; 8 plates; $1.75 (book).

Keldisch, W. — *Russischer Zementkongress;* [14th Russian cement congress, Moscow, March,1912; abstract of proceedings and papers].—Ton-Industrie Ztg., June22, 1912; p. 1006; 2400 w; 35c.

Kohn, A. E.—*Cement in New York Water Project;* [Uses in Catskill aqueduct].—Rock Products, June,1912; p. 21; 8000 w*; 30c.

Kühl, H.—*Die Ursache des Treibens der Zemente;* [Crystallization pressure and its causes in cements].—Ton Industrie Ztg., Aug.17,1912; p. 1331; 2700 w; 35c.

Kühl, H.—*Messung des Kohlenverbrauchs von Drehrohröfen durch Rauchgasanalyse;* [Estimating the coal consumption of rotary tubular ovens by smoke analysis; read to Ver. Deu. Portlandzementfabrikanten].—Ton Industrie Ztg., Sept.7,1912; p. 1447; 2500 w; 35c.

Lejeune, E.—*Determinación del peso específico del cemento por el método de la tara;* [Determination of specific gravity of cement by the tare method].—Soc. Cient. Argentina, Anales; Feb.,1912; pp. 93-96; 75c.

Lombard and Deforge.—*Action of Sea Water on Hydraulic Binding Media; Tests at La Rochelle Laboratory, France.*—Internatnl. Asso. f. Testg. Materials, Proc.; Vol. II, No. 10; 11 pp; 95c.

Abstract in Engg. Record, Sept.7,1912; p. 265; 400 w; 25c.

Luftschitz, H.—*Hydratisierung von Zementen;* [The hydratization of cements].—Ton-Industrie Ztg., June29,1912; p. 1046; 1000 w; 30c.

Maynard, T. P.—*Limestones and Cement*

Materials of North Georgia.—Ga. Geol. Survey, Bull. No. 27; 1912; 293 pp.*; 35c.

McLeish, John.—*The Production of Cement, Lime, Clay Products, Stone and Other Structural Material in Canada,* 1911. (Bull. 181, Canada Dept. of Mines); 55 pp; 35c.

Meyer, Ferd. M.—*Neues Substanz zur Erhöhung der Festigkeit von Portlandzement;* [A new stubstance for increasing the strength of Portland cement].—Ton-industrie-Ztg., Nov.30,1912; p. 1883; 1500 w; 35c.

Meyer, M.—*Preisbewertung von Portlandzement;* [Price evaluation of Portland cements; reply to B. K.'s paper].—Ton-Industrie Ztg., July13,1912; p. 1121; 1100 w; 35c.

Moye, A.—*Deutsche und russische Normen für Portlandzement;* [Comparison of German and Russian standards for cement].—Ton Industrie Ztg., July27,1912; p. 1213; 2500 w; 35c.

Passow, H. — *Hochofenzement;* [Blast furnace slag cement; production and uses].—Berlin, 1912; 51 pp; 75c (pamphlet).

Passow, H.—*Das Colosseusverfahren;* [The Colosseus process of slag-cement manufacture].—Ton-Industrie Ztg., June29,1912; p. 1043; 1500 w; 25c.

Petersen, M.—*Determination of the Very Fine Powder in Portland Cement;* [Tests of its properties].—Internatnl. Asso. f. Testg. Materials, Vol. II, No. 11; 1912; 19 pp*; 95c.

Poulsen, A.—*Diatom-Earth as Pozzolana for Cement;* [Read to Internatnl. Asso. f. Testg. Materials, N. Y.].—Engg. Record, Sept.7,1912; p. 267; 500 w; 25c.

Radford, W. A.—*Cement and How to Use It.*—Chicago, 1912; 369 pp; $1 (book).

Rankin, G. A., and F. E. Wright.—*Beitrag zur Untersuchung der Portlandzementklinder; Ueber die hypothetische Verbindung 8 CaO. Al_2O_3. 2 SiO_2;* [Constitution of Portland cement clinker; The hypothetical compound, 8 CaO. etc.].—Zts. f. anorgan. Chemie, Vol. 75, No. 1, 1912; pp. 63-67*; $1.20.

Reibling, W. C., and F. D. Reyes.—*The Chemical and Physical Properties of Portland Cement;* [Read to Internatnl. Congr. of Appl. Chem'y; abstract].—Met. & Chem'l. Engg., Sept.12,1912; p. 612; 1000 w; 35c.

Rzehulka, A.—*Der erzführende Muschelkalk in Oberschlesien und den benachbarten Gebieten;* [The ore-bearing shell-limestone in Upper Silisia and the neighboring regions].—Erzbergbau, Dec.1,1912; p. 368; 1100 w; 35c.

Schmidt, W. A.—*The Control of Dust in Portland Cement Manufacture by the Cottrell Precipitation Processes;* [Read to Internatnl. Congr. of Appl. Chem'y; abstract].—Met. & Chem'l. Engg., Sept.12, 1912; p. 611; 1200 w; 35c.

Schott, O.—*Méthodes allemandes de fabrication de ciment Portland;* [Wet and dry methods of Portland cement manufacture in Germany; from "Cement Age"].—Rev. d. Matériaux, July,1912; p. 81; Aug., p. 93; 5000 w; 95c.

Schott, O.—*Die Anwendung künstlichen Zuges beim Brennen von Kalk und Zement;* [The use of artificial draft in burning lime and cement].—Ton Industrie Ztg., Aug.29, 1912; p. 1399; 2000 w; 35c.

Schüle, F.—*Standardized Tests for Hydraulic Binding Media by the Use of Standard Sand Prisms.*—Internatnl. Asso. f. Testing Materials, June,1912; 14 pp.; 90c.

Schüle, F.—*The Boilng Tests and the Volume Constancy of Portland Cement in Dry Storage.*—Internatnl. Asso. f. Testg. Materials, Bull. 9, June,1912; 4 pp.; 90c.

Schüle, F., and H. de Gottrau.—*The Significance of the Finest Portland Cement Flour.*—Internatnl. Asso. f. Testg. Materials, Vol. II, No. 11; 1912; 4 pp.; 95c.

Shrader. Fr. — *Zementdachsteine;* [Cement roofing tiles].—Ton Industrie Ztg., Sept.26,1912; p. 1548; 1200 w*; 35c.

Spackman, H. S.—*The Need of a More Severe Soundness Test for Cement.*—Engg. News, July11,1912; p. 80; 2500 w; 25c.

Stone, S. R.—*Bauxite Brick for Kiln or Furnace Lining;* [Preparation and advantages for lining cement kilns and lead refining furnaces; chiefly on Arkansas product].—Mining & Engg. World, Aug.24,1912; p. 341; 2500 w; 10c.

Tressont, G.—*Sur la diversité des méthodes employées dans les laboratoires pour les essais des ciments;* [Diversity of methods used in laboratories for testing cements].—Rev. d. Matériaux, June,1912; p. 65; 1800 w; 65c.

Verein Deutscher Portlandzementfabrikanten.—*Protokoll der Verhandlungen, Feb.-März,* 1912; [Proceedings of the convention of German Portland Cement Manufacturers, Feb.-March, 1912].—Berlin, 1912; 512 pp; $1.50 (book).

Wason, L. C.—*Comparative Economy to the Cement User of Shipping Cement in Cloth vs. Paper Sacks.*—Engg. & Contractg., Oct.9,1912; p. 395; 1000 w; 20c.

William, F.—*La Nouvelle Usine a Ciment Portland de la Coltness Iron Co., Ltd., a Newmains (Écosse);* [The new Portland cement works of the Coltness Iron Co., Ltd., at Newmains].—Revue des Matériaux de Construction et de Travaux Publics, Nov., 1912; p. 137; 850 w; 75c.

Wilson, G.—*Method of Handling Cement Shipped in Bulk, on a Concrete Wall and Bin Construction Job.*—Engg. & Contractg., Oct.9,1912; p. 394; 600 w*; 20c.

B. K.—*Preisbewertung von Portlandzement;* [Price evaluation of Portland cement].—Ton-Industrie Ztg., June22,1912; p. 1003; 1400 w; 30c.

Ver. Deu. Portl. Zement Fabriken.—*Proposal for Establishing a Standard SO_3 Content for Portland Cement.*—Internatnl. Asso. f. Testing Meterials, Bull. 9, June, 1912; 8 pp.; 90c.

———. *Adulterated Cements.*—Engg. & Contractg., Aug.28,1912, p. 225; 1000 w; 20c

———. *Cement in British South Africa;* [Consumption, markets and sources].—Rock Products, Aug.22,1912; p. 26; 500 w; 30c.

———. *Dampfharten von Zementwarten;* [Hardening of cement products in steam].—Ton-Industrie Ztg., July6,1912; p. 1083; 1200 w*; 30c.

———. *Die le Chatelier-Probe in Frankreich;* [The Le Chatelier test in France].—Ton Industrie Ztg., Aug.3,1912; p. 1254; 1000 w; 35c.

———. *Die Oesterreichische Kartellenquete über die Zementindustrie;* [Investigation by the Austrian Ministry of Commerce on the syndicate organization in the cement industry of Austria].—Deu. Bergwerks Ztg., June1,1912; p. 1; June7, p. 1; 2500 w; 50c.

———. *Economies in the Shipment of Cement.*—Engg. & Contractg., Oct.9,1912; p. 393; 1000 w; 20c.

———. *Estimated Cost of Making Ce-*

ment in Oregon.—Engg. & Contractg., July 3,1912; p 2; 500 w; 20c.

———. *Gesundheitsverhältnisse der Arbeiter in preussischen Zementfabriken;* [Sanitary conditions in German Portland cement mills].—Ton Industrie Ztg., Sept.7, 1912; p. 1451; 1800 w; 35c.

———. *Manufacture of Portland Cement;* [Plant and practice at Kansas City works, Mo.].—Rock Products, Sept.,1912; p. 31; 1500 w*; 30c.

———. *Manufacture of Portland Cement at the Geelong Works, Queensland.*—Qu. Govt. Mng. Jnl., Sept.,1912; p. 434; 1200 w*; 35c.

———. *Mecklenburgische Zementwaren-Fabriken;* [Cement-products works of Mecklenburg; brief review].—Ton Industrie Ztg., Aug.6,1912; p. 1269; 500 w; 35c.

———. *Mineral Production of the U. S. in* 1911. (U. S. Geol. Surv. publication).—Mg. & Eng. World, Dec.14,1912; p. 1007; 500 w; 10c.

———. *Normenvorschriften für Portlandzement auf den Hawai Inseln;* [Standards for cement in the Hawaiian Islands].—Ton Industrie Ztg., June 8, 1912; p. 924; 500 w; 30c.

———. *The Australian Portland Cement Co.'s Works, Geelong, Vic.*—Mng. & Engg. Rev., Aug.,1912; p. 403; 1600 w; 45c.

———. *The Portland Cement Co. of Utah;* [Salt Lake City].—Salt Lake Mng. Rev., July30,1912; p. 11; 2100 w*; 25c.

CONCRETE

Blocq van Kuffeler, V. I. P. de.—*Notes on the Action of Sea Water on Reinforced Concrete.*—Internatnl. Asso. f. Testg. Materials, Proc.; Vol. II, No. 10; 1912; 8 pp; 95c.

Burchartz, H.—*Prüfung von Zuschlagsstoffen für die Mörtel- und Betonbereitung:* [Testing of addition products to mortar and concrete].—Ton Industrie Ztg., Aug. 10,1912; p. 1297; 1000 w; tables; 35c.

Burr, Edw.—*Preservation of Reinforced Concrete in Sea Water;* [Corrosion of mortar; read to Internatnl. Congr. on Navigation].—Canadian Engr., Aug.22,1912; p. 349; 3300 w; 25c.

Candlot, E.—*Progressive Increase in Strength of Cement Mortars;* [Read to Internatnl. Asso. f. Testg. Materials, N. Y.].—Engg. Record, Sept.7,1912; p. 266; 500 w; 25c.

Chapman, C. M.—*Tests for Concrete.*—Internatnl. Asso. f. Testg. Materials, Vol. II, No. 11; 1912; p. 8; 95c.

Czarnomski, W.—*On the State of Preservation of Test Blocks Immersed in the Baltic Sea at Libau Harbor.*—Internatnl. Asso. f. Testing Materials, Proc.; Vol. 2, No. 8; 1912; 19 pp.*; 60c.

Davis, J. L.—*Impermeability Tests on Concrete.*—Engg. News, Nov.7, p. 866; 4000 w*; 25c.

Gassier —.—*Comparative Mechanical Strengths and the Stabilities in Sea-Water of Crushed-Sand Mortars and Sea-Sand Mortars.*—Internatnl. Asso. f. Testg. Materials, Vol. II, No. 11; 1912; 12 pp.*; 95c.

Grittner, A.—*Waterproof Concrete;* [Use of coal tar oils, and of soap solutions].—Internatnl. Asso. f. Testing Materials, Proc.; Vol. 2, No. 8; 1912; 4 pp.; 60c.

Hardman, R. C.—*Methods and Costs of Applying Stucco with the Cement Gun;* [From Engg. News].—Canadian Engr., Sept.5,1912; p. 431; 1000 w; 25c.

Jewett, J. Y.—*Tests of Concrete Materials by the U. S. Reclamation Service.*—Internatnl. Asso. f. Testg. Materials, Vol. II, No. 13; 1912; 10 pp.; 95c.

Jones, R. M.—*New Process of Making Concrete Poles;* [Hollow reinforced poles and pipes by compression rolls without exterior forms].—Engg. Record, July13,1912; p. 43; 1200 w*; 20c.

Knaff, A.—*Zur Frage des Schlackenbetons;* [The use of slag in concrete].—Ton Industrie Ztg., Oct.26, p. 1703; 1500 w; 35c.

Loeser, C.—*Die Bewertung von Zement, Sand, Kies und Steinschlag nach technisch-wirtschaftlichen Gesichtspunkten;* [Correct use of cement, sand, silica and rubble; read to Zentralverbd. Deu. Zementwaren & Kunststeinfabr.].—Riga Industrie Ztg., Sept.30,1912; p. 273; 3000 w; 35c.

Robinson, H. St. G.—*The Lateral Pressure of Liquid Concrete;* [Read to Instn. of Civil Engrs.; abstract].—Engg. Record, July20,1912; p. 84; 6000 w; 35c.

Schick, E.—*Der Reform Prüfmaschine;* [The Buchheim-Heister "Reform" testing machine for concrete].—Ton Industrie Ztg., Aug.3,1912; p. 1255; 2500 w*; 35c.

Schüle, F.—*Prismatische Probekörper für die Betonprüfung;* [Prismatic blocks for testing concrete].—Ton-Industrie Ztg., June 15,1912; p. 964; 1000 w; 30c.

Schüle, F.—*Relation between the Tensile Strength and Elasticity of Concrete under Compression.*—Internatnl. Asso. f. Testing Materials, Proc.; Vol. 2, No. 8; 1912; 7 pp.*; 60c.

Schule, F.—*Report of the Committee on Reinforced Concrete;* [International Asso. f. Testing Materials].—Engg. Record, Sept. 7,1912; p. 265; 1200 w; 25c.

Steiner, W. H. and others.—*Concrete Paving in Eight Cities;* [Marshalltown, Ia.; Liberty, Mo.; Bozeman, Mont.; Bemidji, Minn.; Sioux City, Ia.; Appleton, Wis.; Greenville, Ill.].—Rock Products, June, 1912; p. 26; 10,000 w*; 30c.

Talbot, K. H.—*Concrete Pavements; History and Summary of Practice;* [Read to Iowa Engg. Soc.; abstract].—Engg. & Contractg., July10,1912; p. 44; 3000 w; 20c.

White, A. H.—*Destruction of Cement Mortars and Concrete Through Expansion and Contraction;* [read to Amer. Soc. f. Testing Materials].—Canadian Engr., June 27,1912; p. 843; 4500 w; 25c.

Wig, R. J.—*Effect of High-Pressure Steam on the Crushing Strength of Portland Cement Mortar and Concrete.*—U. S. Bur. Standards, Technologic Paper No. 5; 1912; 25 pp.; 50c.

Wig, R. J. and P. H. Bates.—*Tests of the Absorptive and Permeable Properties of Portland Cement Mortars and Concretes;* and *Tests of Damp-Proofing and Waterproofing Compounds and Materials.*—U. S. Bur. of Standards. Technologic Paper No. 3; 1912; 127 pp.; 50c.

De Wyrall, C.—*Electrolytic Action on Unreinforced Concrete.*—Internatnl. Asso. f. Testg. Materials, Bull. 9, June,1912; 2 pp.; 90c.

Asso. of Amer. Portl. Cement Manfrrs.—*Concrete Highways.*—Philadelphia, 1912; 95 pp.*; 10c.

———. *A Compressed-Air Concrete Mixer and Conveyor.*—Engg. News, Aug.8, 1912; p. 244; 2100 w*; 20c.

———. *Methods of Determining Quality*

of Concrete in Structure.—Engg. & Contractg., Sept.4,1912; p. 253; 600 w; 20c.

———. *Notes on Methods of Securing Impermeable Concrete for Marine Works.*—Engg. & Contractg., Aug.21,1912; p. 201; 1800 w; 20c.

———. *Oil-Mixed Portland Cement Concrete.*—Cement, July, 1912; p. 61; 6000 w*; 25c.

———. *Plant for the Manufacture of Concrete Brick;* [New Jersey Unit Brick & Tile Co. works, Bamber, N. J.].—Engg. Record, June29,1912; p. 710; 1100 w*; 20c.

———. *Reinforced Concrete and Its Use Underground.*—Mg. & Eng. World, Dec.1, 1912; p. 1123; 1000 w; 10c.

LIME

Bannister, C. O., and McNamara, W.—*Effect of Lime in the Determination of Lead.*—Mg. & Eng. World, Nov.30,1912; p. 1004; 750 w; 10c.

Bertelli, L.—*Cementi e Calci Idrauliche;* [Cements and Hydraulic Limes].—Milan, Italy; 1912; 573 pp.] 44 plates; $3 (book).

Bied, J.—*The Porosity of Mortars.*—Internatnl. Asso. f. Testg. Materials, Proc.; Vol. II, No. 10; 1912; 8 pp*; 95c.

Burchard, E. F.—*The Production of Lime in* 1911.—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 76 pp.; 10c.

Coghill, Will H.—*Short-Order Lime Water for the Laboratory.*—Mg. & Eng. World, Nov.30,1912; p. 995; 10c.

Coulbeaux, M.—*Gisements de Borate de Chaux d'Asie Mineure;* [Deposits of borate of lime in Asia Minor].—Annales de Mines (Paris), Oct.,1912; p. 294; 6000 w; 65c.

Emley, W. E.—*Heat Efficiency of Lime Kilns.*—Natnl. Lime Manfrrs. Asso., Proc., 10th Convention, No. 8; 1912; 9 pp.; 50c.

Friedrich.—*Reactions in Roasting of Carbonates;* [in German].—See under Lead.

Groud, C.—*Chaux en agriculture;* [Lime in agriculture].—Rev. d. Matériaux, March, 1912; p. 31; April, p. 47; June, p. 77; July, p. 88; Aug., p. 103; Sept., p. —; 6000 w; $1.50.

Forgy, J. E.—*A Study of Several Types of Lime Kilns.*—Natnl. Lime Manfrrs. Asso., Bull. No. 12, 1912; 25 pp.; 35c.

Hambloch, A.—*Die lösliche Kieselsäure im Trass;* [Determining the soluble silica in trass].—Chemiker Ztg., Sept.17,1912; p, 1058; 600 w; 35c.

Hentschel, Dr. Georg.—*Hydraulischer Kalk;* [Hydraulic lime].—Tonindustrie Ztg., Nov.23,1912; p. 1843; 1200 w; 35c.

Jean, E.—*Cuisson de chaux pures;* [The production of pure lime].—Rev. d. Matériaux, April,1912; May; June; Aug., p. 98; 4000 w*; $2.

Kloes, J. A. van der, and A. Hambloch.—*Influence of the Composition of Mortar and the Quality of the Stones Upon the Durability of Masonry.*—Internatnl. Asso. f. Testg. Materials, Vol. II, No. 11; 1912; 13 pp.; 95c.

Korten, Fr.—*Mechanische Kalkmilchbereitung;* [Mechanical direct production of milk of lime in production of ammonium sulphate].—Glückauf, June29,1912; p. 1042-1044*; 50c.

Kosmann, B.—*Hydraulic Kalk für Kalksandsteine;* [Hydraulic lime for sandlime brick].—Ton Industrie Ztg., Aug.8,1912; p. 1281; 2700 w; 35c.

Lazell, E. W.—*Standardization of Lime.*—Natnl. Lime Manfrrs. Asso., Bull. No. 6; 1912; 10 pp; 50c.

Maynard, T. P.—*Limestones and Cement Materials of North Georgia.*—Ga. Geol. Survey, Bull. No. 27; 1912; 293 pp.*; 35c.

Muller van Brakel, —. *Small Suction Dredger Used in the Dutch Shell Lime Industry.*—Internatnl. Marine Eng., May,1912; 2 pp*; 45c.

Page, L. W.—*The Use of Limestone in Building Highways, with Hints on Preparation.*—10th Convention Natnl. Lime Manfrrs. Asso.; Bull. 7, 1912; 10 pp; 50c.

Schleier, E.—*Kalkbedarf der Kalksandsteinindustrie;* [Lime needs of the sandlime industry].—Ton Industrie Ztg., Aug. 29,1912; p. 1402; 600 w; 35c.

Schmatolla, E.—*Gaserzeuger, Gasfeuerungen und Öfen, insbesondere für natürlichen Zug und natürlichen Druck;* [Gas-producers, gas-firing and ovens, especially for natural draft and natural pressure].—Berlin and N. Y.; 1912 (2d edition), Vol. I, Parts 1-3; $1 (book).

Schott, O.—*Die Anwendung künstlichen Zuges beim Brennen von Kalk und Zement;* [The use of artificial draft in burning lime and cement].—Ton Industrie Ztg., Aug.29, 1912; p. 1399; 2000 w; 35c.

Spackman, H. S.—*Review of the Year's Work in the Development of Alca Lime.*—Natnl. Lime Manfrrs. Asso., Bull. No. 12; 1912; 11 pp.; 25c.

Storsberg, Otto.—*Der Dolomitkalk als Düngemittel;* [Dolomite lime as fertilizer].—Tonindustrie Ztg., Nov.2,1912; p. 1740; 1200 w; 35c.

van der Kloss, J. A.—*Conséquences de l'usage des mortiers mal composés;* [Some consequences of the use of mortars of inferior composition].—Rev. d. Matériaux, June,1912; p. 61; July, p. —; 4000 w*; 90c.

Vaubel, Wm.—*Das Löschen des hydraulischen Kalkes;* [Slacking hydraulic lime].—Ton Industrie Ztg., Aug.10,1912; p. 1299; 1000 w; 35c.

Warner, I.—*The Target of Lime Cost Reduction.*—Natnl. Lime Manfrrs. Asso.; Proc. of 10th annual convention; Bull. 10; 1912; 9 pp; 50c.

———. *Advantages of Hydrated Lime.*—Rock Products, July,1912; p. 42; 1200 w; 35c.

———. *Die wirtschaftliche Lage der Kalkindustrie;* [Present position of the lime industry in Germany].—Ton Industrie Ztg., June8,1912; p. 927; 1400 w; 30c.

———. *Electricity in Plaster and Lime Plants.*—El. Rev. (Chicago), Oct.12, p. 679; 3000 w*; 20c.

———. *Kein Kali ohne Kalk;* [Necessity of using lime with potash fertilizers; mineralogy and chemistry of potash fertilizer action].—Ton-Industrie Ztg., July6,1912; p. 1084; 800 w; 35c.

———. *New Hydrating Plant;* [Moore's lime works, Mad River valley, south-central Ohio].—Rock Products, Sept.,1912; p. 45; 1300 w*; 30c.

———. *Zur Feier des 25-jahrigen Bestehens der A-G. Rheinisch-Westfälische Kalkwerke Dornap;* [The Dornap lime works; quarter-centennial celebration].—Ton-Industrie Ztg., July9,1912; p. 1093-1096; 2000 w*; 30c.

Sandlime Products

André, R.—*Les éboulements des briques silico-calcaires dans les autoclaves;* [The

breaking down of sandlime brick in the steaming pans].—Rev. d. Matériaux, Oct., 1912; p. 112-B; 2000 w; 45c.

André, R.—*Les accidents dans les fabriques de briques silico-calcaires;* [Statistics of accidents in French sandlime-brick works, 1902-1910].—Rev. d. Matériaux, June, 1912; p. 67-B; 1200 w; tables; 65c.

Kosmann, B.—*Hydraulische Kalk für Kalksandsteine;* [Hydraulic lime for sandlime brick].—Ton Industrie Ztg., Aug.8, 1912; p. 1281; 2700 w; 35c.

Schleier, E.—*Kalkbedarf der Kalksandsteinindustrie;* [Lime needs of the sandlime industry].—Ton Industrie Ztg., Aug. 29,1912; p. 1402; 600 w; 35c.

Schroeder, H.—*Unfälle in Kalksandsteinfabriken;* [Accidents in sandlime works; read to Ver. Deu. Kalksandsteinfabriken].—Ton Industrie Ztg., Oct.10, p. 1621; 1600 w*; 25c.

Simpson, P. L.—*La fabrication de la brique silico-calcaire en Europe;* [The sandlime brick industry in Europe; from Brick & Clay Record].—Rev. d. Matériaux, July, 1912; p. 79-B; Aug., p. 91-B; 4500 w; 95c.

———. *Dampfverbrauch einer Kalksandsteinfabrik;* [Steam consumption of a sandlime works].—Bayer. Dampfkess. Ver., Zts., Sept.15,1912; pp. 165-166*; 75c.

———. *Lösliche Kieselsäure im Trass;* [Soluble silica in trass].—Ton-Industrie Ztg., July13,1912; p. 1122; 1000 w; 35c.

———. *Mecklenburgs Kalksandstein-Industrie;* [The sandlime industry of Mecklenburg].—Ton Industrie Ztg., Aug.6,1912; p. 1273; 1000 w*; 35c.

———. *Mehrmaliges Härten von Kalksandsteinen;* [The repeated stage hardening of sandlime brick].—Ton Industrie Ztg., June6,1912; p. 911; 500 w; 35c.

———. *Up-to-date Massachusetts Sandlime Plant;* [Worcester].—Brick, Nov.15, p. 399; 1000 w*; 20c.

Agricultural Lime

See under Fertilizers.

BRICK AND TILE

Blair, W. P.—*Brick Street Paving.*—Cleveland Engg. Soc., Jnl.; Nov.,1912; pp. 195-199; 45c.

Benfey, G.—*Ziegelherstellung in Argentinien;* [Brick manufacture in Argentina].—Ton-Industrie Ztg., June27,1912; p. 1028; 2000 w; 30c.

Benfey, G.—*Mährische Ziegeleien;* [Modern equipment in some Moravian brick works].—Ton Industrie Ztg., Aug.20,1912; p. 1348; 1500 w*; 35c.

Bock, O.—*Enfournement des tuiles dans le four annulaire;* [Mode of insertion of tiles in the annular oven].—Rev. d. Matériaux, June,1912; p. 61-B; 1600 w*; 65c.

Burchell, H. C.—*Sydney Pressed-Brick Co., Ltd., N. S.*—Canadian Mng. Jnl., Oct. 15, p. 713; 400 w*; 25c.

Crain, G. D.—*Piece Work System Reduces Expenses.*—Brick, Oct. 1,1912; p. 248; 2500 w*; 20c.

Cramer, E. — *Sind Wassdurchlässige Dachziegel als minderwertig anzusehen?* [Are permeable roofing-tiles to be regarded as valueless?]—Ton Industrie Ztg., Aug.15, p. 1319; 3300 w; 35c.

Frisch, G.—*Kontingentierung der Ziegeleien bei Gründung von Verkaufsvereinigungen;* [The assigning of allotments in the formation of the German brick sales-syndicate].—Ton-Industrie Ztg., Oct.31, p. 1723; 1000 w; 35c.

Herrmann, E.—*Die Maschinenanlage im Ziegeleibetriebe;* [Engine and power plant installation and maintenance in brick works].—Ton-Industrie Ztg., Oct.29, p. 1711; 1400 w; 35c.

Hiertz, Wm.—*Die Ziegeleien im Newatale bei St. Petersburg;* [The brick works of the Neva valley near St. Petersburg, Russia].—Ton-Industrie Ztg., July16,1912; p. 1131; 5000 w*; 35c.

Hoare, W. R.—*Production de la couleur des briques;* [The art of color production in brick; from the Brickbuilder].—Rev. d. Matériaux, July,1912; p. 82-B; 1000 w; 65c.

Howard, J. E.—*Strain Measurements of Brick Pavements.*—Engg. News, June20, 1912; p. 1173; 2200 w*; 25c.

Kanolt, C. W.—*Melting Points of Fire Bricks.*—Canadian Engr., Aug.22,1912; p. 348; 750 w; 25c.

Lovejoy, E.—*Emploi du manganèse pour la coloration des briques;* [Use of manganese for coloring bricks; from "Brick"].—Rev. d. Matériaux, June,1912; p. 65-B; 3000 w; 65c.

McGeorge, Wm.—*The Occurrence of Efflorescence on Lava Bricks.*—Jnl. of Ind'l & Engg. Chem'y, Aug.,1912; p. 559; 65c.

McLeish, John.—*The Production of Cement, Lime, Clay Products, Stone and Other Structural Material in Canada,* 1911. (Bull. 181, Canada Dept. of Mines.) 55 pp; 35c.

Middleton, J.—*Statistics of the Clay Working Industries in the U. S. in* 1911.—U. S. Geol. Survey, Mineral Resources f 1911; 1912; 66 pp.; 20c.

Ricklefs, O.—*Die technischen und wirtschaftlichen Verhältnisse der mecklenburgischen Ziegelindustrie;* [Technical and industrial development of the Mecklenburg brick industry].—Ton Industrie Ztg., Aug. 6,1912; p. 1267; 1600 w; 35c.

Ries, H., and J. Keele.—*Preliminary Report on the Clay and Shale Deposits of the Western Provinces.*—Canada Dept. Mines, Geol. Survey Branch, Memoir No. 24-E; 1912; 231 pp*; 50c.

Sachse, H.—*Die Vietzer Ton Industrie;* [The tile, brick and clay industries of the Vietz district, eastern Brandenburg].—Ton Industrie Ztg., June11,1912; p. 935; 3500 w*; 30c.

Sachse, H.—*Ziegelei Bornhofen;* [The Bornhofen brick works, near Neudamm].—Ton Industrie Ztg., July23,1912; p. 1189; 1000 w*; 35c.

Schmatolla, E.—*Gas Kilns and Producers.*—Brick, Nov.1, p. 345; 800 w*; 25c.

Schneider, C.—*Gefrierverfahren mit Mauersteinen;* [Frost tests with brick].—Ton-Industrie Ztg., July4,1912; p. 1067; 500 w*; 25c.

Veltener, J., and A. Muck.—*Trockene oder nasse Ziegel;* [Wet vs. dry brick].—Ton Industrie Ztg., Sept.3,1912; p. 1424; 1000 w*; 35c.

Vogler, F.—*Neu Konstruktion einer Tigler Trockenpresse;* [New model of the Tigler brick press].—Ton Industrie Ztg., Aug. 15,1912; p. 1322; 1000 w*; 35c.

———. *A Plant for Testing Fireproof Tiling.*—Engg. News, Aug.15,1912; p. 294; 1800 w*; 25c.

———. *Eau dans les fours;* [Presence and sources of moisture in brick kilns; from

"Brit. Clay Worker"].—Rev. d. Matériaux, June,1912; p. 64-B; 2500 w; 65c.

———. *Ein Freund des Zieglers;* [Atometer and other aids in the brick-drying shed].—Ton Industrie Ztg., Sept.24,1912; p. 1535; 1000 w*; 35c.

———. *Gemeindeziegeleien in Oesterreich-Ungarn;* [Municipal and county brick works in Austria].—Ton Industrie Ztg., Sept.24, 1912; p. 1536; 1600 w; 35c.

———. *Maschinelle Entladung von Ziegeln;* [Crane loading and unloading of bricks].—Ton-Industrie Ztg., Oct.31, p. 1724; 500 w*; 35c.

———. 60,000,000 *Paving Blocks a Year;* [Methods at Bessemer, Pa., vitrified brick plant].—Brick, Oct.1,1912; p. 252; 1500 w*; 20c.

———. *The Life of Brick Pavements.*—Engg. & Contractg., June19,1912; p. 697; 4000 w; 20c.

CERAMICS

Anderson, G. E.—*Exports of Chinese Porcelain;* [U. S. Consul. Rep.], Nov.6, p. 682; 1000 w; 20c.

Barth, J.—*Wie macht man das Zementrohr wettbewerbsfähiger;* [Industrial competition between clay and cement piping].—Ton Industrie Ztg., Oct.26, p. 1700; 1000 w*; 35c.

Beals, A. E.—*Clay Mining Problems in the Eastern States.*—Brick, Sept.15, 1912; p. 211; 2000 w*; 20c.

Beals, A. E.—*The Building Material of the Age;* [Terra cotta and its advantages].—Brick, Oct.1,1912; p. 245; 1200 w*; 20c.

Benfey, G., and C. Wagner.—*Die neue Presse;* [New presses]. — Ton-Industrie Ztg., June13,1912; p. 951; 1800 w*; 30c.

Bleininger, A. V. and G. H. Brown.—*The Testing of Clay Refractories, with Special Reference to Load-Carrying Capacity at Furnace Temperatures.*—U. S. Bur. Standards, Technologic Paper No. 7; 1912; 78 pp.*; 50c.

Bordeau, G.—*Réchauffeur d'air pour le séchage des produits céramiques;* [Air reheater for drying in clay works].—Rev. d. Materiaux, Oct.,1912; p. 110-B; 700 w*; 45c.

Burchard, E. F.—*The Production of Glass Sand, Other Sand and Gravel in* 1911.—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 56 pp.; 10c.

Buckman, H. O.—*Die Entstehung von Verwitterungstonen;* [The genesis of residual clays; German abstract from Amer. Ceramic Soc., Trans., Vol. 13, 1911; pp. 336-384].—Ton Industrie Ztg., June11,1912; p. 940; 1800 w; 30c.

Geysbeek, S.—*Clay Deposits and Clay Industries of Washington.*—Amer. Ceramic Soc., Trans. f. 1911; 1912; pp. 751-764.

German abstract in Ton Industrie Ztg., July18,1912; p. 1053; 500 w; 35c.

Grünwald, J.—*Chemische Technologie der Email-Rohmaterialen;* [Chemical technology of the crude materials in the enamel industries].—Dresden, 1912; 282 pp.; $2; (book).

Kirkpatrick, F. A.—*Tests on the Clays of Henry County.*—Resources of Tennessee, Nov.,1912; pp. 406-423*; 50c.

Krase, F.—*Selenium Glass;* [From "Sprechsaal," Vol. 45, pp. 214-216; 227-228].—Jnl. of Indl. & Engg. Chem'y, July,1912; p. 539; 3000 w; 65c.

Ladd, Emil.—*Rapid Method for the Analysis of Kaolin.*—Mining & Engg. World, June29,1912; p. 1350; 750 w; 10c.

Landrum, R. D.—*Enamels for Sheet Steel;* [Preparation of boro-silicates of sodium, potassium, calcium and aluminum].—Jnl. of Ind'l & Engg. Chem'y, Aug.,1912; p. 561; 2100 w; 65c.

Lossen, F.—*Terra sigillata;* ["Terra Sigillata," glaze or glistening finish on clay products; Fischer German Pat. No. 206,-395].—Ton Industrie Ztg., July25,1912; p. 1201; 2700 w; 35c.

Lovejoy, E.—*Clay Mining Methods.*—Brick, Sept.15, p. 203; 3000 w*; 20c.

Mellor, J. W.—*Some Notes on the Action of Heat on Fire Clay;* [From Birmingham Engg. & Mng. Jnl., July,1911; pp. 459-464].—Cheml. Met. & Mng. Soc. of S. Afr., Jnl., April,1912; p. 426; 1800 w; 90c.

Middleton, J.—*Statistics of the Pottery Industry in the U. S. in* 1911.—U. S. Geol. Surv., Mineral Resources f. 1911; 1912; 11 pp.; 20c.

Middleton, J.—*Statistics of the Clay Working Industries in the U. S. in* 1911.—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 66 pp.; 20c.

Quennsell, H.—*Die keramische Industrie im Osten der Vereinigten Staaten von Nord Amerika;* [The ceramic industries of the eastren U. S.].—Ton Industrie Ztg., June 11,1912; p. 941; June13, p. —; 7000 w; 50c.

Ries, H., and J. Keele.—*Preliminary Report on the Clay and Shale Deposits of the Western Provinces.*—Canada Dept. Mines, Geol. Survey Branch, Memoir No. 24-E.; 1912; 231 pp.*; 50c.

Ries, H., and J. Keele.—*Reports on Progress of Investigation of Clay Resources;* [Including special reports on whiteware materials in Ontario and Quebec; Kaolin near Huberdeau, Que.].—Canada Geol. Survey, Rep. f. 1911; 1912; pp. 225-239.

Ross, J. G.—*The Quebec China Clay Industry.*—Canadian Mng. Jnl., July1,1912; p. 439; 2000 w*; 25c.

Searle, A. B.—*The Clay Worker's Handbook.*—London, 1912; 420 pp*; $2.50 (book).

Schnurpfeil, H.—*Die Glasschmelzöfen und ihre Feuerungsanlagen;* [Smelting furnaces in the glass industry, and their firing].—Dresden, 1912; pp. —*; $2; (book).

Sokoloff, A. M.—*Zur Frage des molekularen Zerfalles des Kaolinits im Anfangsstadium des Glühens;* [Molecular decomposition of kaolinite at 400 to 1000°].—Ton-Industrie Ztg., July11,1912; p. 1107; 3000 w*; 35c.

Tostmann, C.—*Ausstellung kunstgewerblicher Töpferei Erzeugnisse in Bunzlau;* [The exhibit of industrial pottery at Bunzlau].—Ton Industrie Ztg., Oct.8, p. 1614; 1500 w; 35c.

Verband Keramischer Gewerke in Deutschland. — 35 *Hauptversammlung;* [Abstracts of papers read at 35th convention of German Union of Ceramic Works, Berlin, June28,1912].—Chemiker Ztg., Aug.1, 1912; p. 883; 1500 w; 35c.

———. *A Mining Tour of Cornwall;* [Visit of inspection of scientific mining and engineering societies to tin and china-clay centers].—Mng. World (London), July20, 1912; p. 79; 9000 w; 35c.

———. *Conseils aux propriétaires de fours continus;* [Some advice to owners of continuous operating ovens; from British

Clay Worker].—Rev. d. Matériaux, July, 1912; p. 80-B; 1800 w; 65c.

———. *Clay Deposits of Middle Musquodoboit, N. S.*—Canadian Mng. Jnl., Sept. 15,1912; p. 656; 2000 w*; 35c.

———. *Clays, Shale and Kaolin Developments and Resources of the Southern States.*—Brick, Oct.15, p. 299; 2100 w*; 25c.

———. *Die Tonindustrie von Grossalmerode;* [The clays and ceramic industries of Grossalmerode near Cassel].—Ton Industrie Ztg., Sept.12,1912; p. 1471; 1000 w; 35c.

———. *Ein neues elektrisches Tonreinigungsverfahren;* [New electro-osmotic process for purifying kaolin and clays].—Ton Industrie Ztg., Aug.8,1912; p. 1283; 1000 w*; 35c.

———. *Kaolin or China Clay.*—Paper, Nos. 9 and 10, 1912; pp. 15-17, 15-16; 50c.

———. *Manufacture of Fire-Brick at Westville, N. S.*—Canadian Mng. Jnl., Sept. 15,1912; p. 654; 1000 w*; 35c.

———. *Unschädlichmachen von Kalk im Ton;* [Rendering lime harmless in clays].—Ton Industrie Ztg., Aug.20,1912; p. 1347; 1800 w; 35c.

———. *Zur Kenntnis des Rüdersdorfer Schlämmtones;* [Composition and behavior of the calcareous slime clays of Rüdersdorf, Germany].—Ton Industrie Ztg., Sept.12, 1912; p. 1472; 1200 w; 35c.

CHAPTER XI.

Other Non-Metals.

ABRASIVES

Baumhauer, H.—*Ueber die Krystalle des Carborundums;* [Crystallography of carborundum].—Zts. f. Krystallogr., Dec., 1911; pp. 33-40; 75c.

Boeck, P. A.—*Alundum as a Refractory Material;* [Read to Internatnl. Congr. Appl. Chem'y; abstract].—Met. & Cheml. Engg., Sept. Suppl.; 1912; p. 581; 400 w; 35c.

Bordewich, H.—*Scandinavian Pulp-Mill Stones.*—U. S. Consul. Rep., Nov.7, p. 689-692; 20c.

Fitzgerald, F. A. J.—*Crystolon; Silicon Carbide;* [Manufacture at Niagara].—Met. & Cheml Engg., Sept.,1912; p. 519; 2000 w*; 35c.

Forbes, E. B.—*Alundun Not Constant in Weight;* [Restrictions in use of alundum laboratory utensils].—Jnl. of Indl. & Engg. Chem'y, July,1912; p. 544; 750 w; 65c.

Lamb, H. Mortimer.—*Asbestos Mining in Quebec; and, Present Condition of the Asbestos Industry in Canada.*—Canadian Mng. Jnl., July1,1912; pp. 453-458*; 5000 w; 25c.

Manhard, W. E.—*Canada Pebbles;* [Port Arthur, Ont., on Lake Superior].—Rock Products, Sept.,1912; p. 49; 500 w*; 30c.

Miller, W. J.—*The Garnet Deposits of Warren County, N. Y.*—Econ. Geol'y, Aug., 1912; pp. 493-501*; 65c.
Abstract in Mg. & Eng. World, Dec.14, 1912; p. 1084; 1200 w; 10c.

Phalen, W. C.—*The Production of Abrasive Materials in* 1911; [Statistics of production, etc., in the U. S.; with notes on millstones in N. Y. and Va.; grindstones and pulpstones, chiefly Ohio; oilstones of Arkansas; emery; Canadium corundum; N. Hamp. garnet; diatomaceous earth in Va.; alundum, carborundum].—U. S. Geol. Surv., Mineral Resources f. 1911; 1912; 22 pp.; 20c.

Surr, G.—*Use of Alundum Filtering Crucible in the Laboratory.*—Mining & Engg. World, June29,1912; p. 1356; 1000 w; 10c.

———. *Minerals of the Murchison Range, Transvaal,* 3: *Mica and Corundum Deposits.*—S. Afr. Mng. Jnl., June29, p. 655; July6, p. 700; July13, p. —; 4500 w; 70c.

———. *Mining Prospects in the Low Country;* [Murchison range, Transvaal gold, mica, corundum].—S. Afr. Mng. Jnl., July13,1912; p. 742; 2000 w; 35c.

ACIDS (MINERAL)

Baker, J. T.—*Problems in the Manufacture of Chemically Pure Acids;* [Read to Amer. Inst. of Cheml. Engrs.; from Vol. 4 of Trans.].—Met. & Cheml. Engg., Nov., 1912; p. 719; 4600 w*; 35c.

Breger, C. L.—*The "American" Zinc Smelter at Hillsboro, Illinois.*—Mining & Engg. World, Nov.9, p. 847; 5000 w*; 10c.

Cowles, A. H.—*Alumina, Hydrochloric Acid, Alkalis, and White Hydraulic Cement from Clay, Salt and Lime.*—See Aluminum.

Jaubert, G. F.—*Les acides minéraux de la grande industrie chimique;* [Mineral acids of the chemical industries].—Paris, 1912; pp. —*; $4.50; (book).

Knorr, Jos.—*Bestimmung von rauchender Schwefelsäure oder Oleum;* [Estimation of fuming sulphuric acid].—Chemiker Ztg., Oct.29, p. 1262; 500 w; 35c.

Moore, H. C.—*Calculation of Sulphuric Acid Stock by Approximate vs. Accurate Methods; Special Slide Rule.*—Jnl. of Ind'l. & Engg. Chem'y, Sept.,1912; p. 677; 2400 w; 65c.

Norton, T. H.—*Improved Sulphuric Acid Chambers;* [Moritz system].—Jnl. of Indl. & Engg. Chem'y, July,1912; p. 532; 2500 w; 65c.

Patterson, G. W., and L. B. Cheney.—*Contact Sulphuric Acid from Brimstone;* [Schroeder process].—8th Internatnl. Congr. of Appl. Chemy., Vol. 2, pp. 215-220. Also in Met. & Cheml. Engg., Sept.12,1912; p. 630; 5000 w*. Also in Jnl. of Indl. & Engg. Chemy., Oct., p. 723; 2500 w; 65c. Also in Amer. Fertilizer, Oct.5, p. 45; 2500 w; 25c.

Patterson, G. W.; L. B. Cheney; U. Wedge, and others.—*Symposium on Sulphuric Acid; International Congress of Applied Chemistry;* [Abstract]. — Met. & Cheml. Engg., Sept.12,1912; p. 630; 5000 w*; 35c.

Petersen, H.—*Comparaison des systèmes de fabrication de l'acide sulfurique;* [Comparison of the tower vs. chamber systems of sulphuric acid manufacture].—Phosphate, Oct.7, p. 855; 600 w; 35c.

Pulsifer, H. B.—*Metallurgy of Lead; Flue-Dust, Fume and Acid.*—Salt Lake Mng. Rev., Nov.15, p. 19; Nov.30, p. 18; 6500 w*; 25c.

Saunders, —. *Metallurgy at Mt. Morgan, Queensland.*—See Copper.

Wedge, U.—*The Sulphuric Acid Industry in the U. S.;* [Read to 8th Internatnl. Congr. of Appl. Chem'y, 1912; abstract].—Amer. Fertilizer, Oct.19, p. 39; 2500 w; 25c.

Wilke, Wm.—*Combination of the Contact Process with the Ordinary Lead Chamber or Tower Systems;* [Read to Internatnl. Congr. of Appl. Chem'y; abstract].—E. & M. J., Sept.14,1912; p. 487; 750 w; 25c. Also in Met. & Cheml. Engg., Sept.12, p. 629; 1000 w; 35c.

Wilke, Wm.—*Sulphuric Acid; Chamber Process and Tower System.*—Amer. Fertilizer, July13,1912; p. 41; 1200 w*; 25c.

———. *Costs of Producing Sulphuric Acid at Port Wallaroo Smelter, S. Australia.*—E. & M. J., Aug.31,1912; p. 402; 250 w; 25c.

ARSENIC

Bleyer, B., and Br. Müller.—*Ueber Berylliumarseniate;* [The beryllium arseniates].—Zts. f. anorgan. Chemie, 1912, No. 3; pp. 285-292; $1.15.

Friedensburg.—*Mining Industry in Cornwall and Devonshire;* [in German].—See Tin.

Hess.—*U S. Production,* 1911. See Antimony.

Hooper, H. E.—*Estimation of Arsenic and Antimony* [in speisses, slags, mattes, and

concentrates].—E. & M. J., Oct.12, p. 706; 2100 w; 25c.

Katzer, Fr.—*Zur Kenntnis der Arsenerzlagerstätten Bosniens;* [The arsenic ore deposits of Bosnia; chiefly geologic].—Oestr. Zts. f. Berg- & H-wesen, May18, 1912; p. 267; May25, p. 285; 4500 w*; 75c.

Job, P.—*Réduction électrolytique de l'acide phosphorique et de l'acide arsénique;* [Electrolytic reduction of phosphoric and arsenic acid].—Laval,1912; 11 pp; (pamphlet).

———. *Mine and Mill Production, German,* 1909 *and* 1910.—See under Lead.

———. *Orpiment Shipments from Interior China;* [near Siakwan, Yunnan].—U. S. Consul. Rep., Sept.3, p. 1143; 200 w; 20c.

ASBESTOS

Blatchford, Torrington.—*The Asbestos Deposit at Soanesville, Pilbara Goldfield, W. Aust.* (West Australia Geological Survey Report; abstract).—Mg. Jnl. (London), Nov.30,1912; p. 1176; 1500 w; 35c.

Currens, W. W.—*Asbestos; Early Uses; Varieties.*—Mines & Minerals, Nov., p. 229; 1200 w; 35c.

Denis, T. C.—*Annual Report, Quebec Dept. of Mines,* 1911.—See Quebec.

Jones, H.—*Asbestos in S. Australia.*—Aust. Mng. Standd., July4,1912; p. 9; 1000 w; 35c.

de Hautpick, E.—*Russian Asbestos Deposits;* [Describes deposits in the Ural, Siberia and Caucasus].—Mng. Jnl.,Aug.3, 1912; p. 783; 2000 w; 35c.

Kryshanofsky, W. F.—*Serpentine Asbestos Deposits in the Urals;* [Paper read before Can. Mg. Inst.; abstract].—Mg. & Eng. World, Nov.30,1912; p. 1002; 750 w; 10c.

Maufe, H. B.—*The Asbestos Quarries of the Victoria District.*—Geol. Survey of South Rhodesia, Rep. f. 1911; pp. —; $1.

Pearson, J. R., and L. R. Hoff.—*Asbestos Fibres and Their Use in Fabrics;* [Read to Canadian Soc. of Civ. Engrs.].—Mng. Sci., Nov.14, p. 313; 1400 w; 20c.

Springer, J. F.—*Asbestos;* [Sources, production and properties].—Cassier's Mag., Oct.,1912; pp. 298-309*; 35c.

Woolsey, W. J.—*Asbestos History in Quebec.*—Canadian Mng. Jnl., Nov.1, p. 745; 2000 w*; 25c.

ASPHALTS AND BITUMENS

See also Coking; By-Products, etc.

Abraham, H.—*Classification of Bituminous and Resinous Substances.*—8th Internatnl. Congr. of Appl. Chem'y, Proc., Vol. 10, 1912; pp. 7-15.

Balogh, E.—*Die bituminösen Kalke und ihre Mineralien aus der Umgebung von Kolozsvár, Kajántó und Torda;* [Geology of the bituminous limestones and their minerals near Kolozsvár, Kajántó and Torda, Transylvania].—Siebenburg. National Museum, Mittlngn., Vol. I, 1911; 32 pp.*; $1.

Barrios, Ch.—*Sur la composition et le gisement de la paraffine des schistes bitumineux du bassin houiller du Pas-de-Calais;* [Composition and occurrence of paraffin in bituminous shales in the Pas-de-Calais coal field, North France].—Soc. Geol. du Nord, Annales, Vol. 40, 1911; pp. 157-170.

Breger, —. *Index to Oil Literature.*—See under "Petroleum and Oils."

Breynaert, M. F.—*Le Gisement Asphaltique du Val de Travers;* [The asphalt deposit of the Travers valley (France)].—Annales de Mines (Paris), Oct.,1912; p. 316; 9500 w*; 65c.

Dalton, L. V.—*Venezuela;* [Includes notes on oil and asphalts].—London, 1912; pp. —; 34 figs; map; $3.50 (book).

Day, D. T.—*The Production of Asphalt, Related Bitumens and Bituminous Rock in* 1911; [Cal., Texas, Ky., Utah, Okla., Trinidad].—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; pp. 21; 10c.

Cushman, A. S.—*Bituminous Materials for Road Building;* [Reviews general requirements for various conditions; read to Amer. Road Congr.; abstract].—Engg. Record, Oct.12, p. 415; 400 w; 20c.

Earl, F. B.—*Methods of Road Construction and the Problem of Dust Suppression;* [Comparison of various bituminous and asphaltic treatments, and Tarvia asphalt-macadam].—Amer. Soc. of Engg. Contractors, Jnl.; May,1912; pp. 265-280; 35c.

Higgins, W. C.—*The American Ozokerite Co.;* [Mining and preparation at Pleasant Valley, Utah].—Salt Lake Mng. Rev., Oct. 15, p. 11; 3500 w*; 25c.

Hubbard, P.—*The Bitumen Content of Coarse Bituminous Aggregates.*—Intenatnl. Asso. f. Testg. Materials, Vol. II, No. 11; 1912; 7 pp.; 95c.

Knapp, I. N.—*Natural Gas, with Incidental Reference to Other Bitumens.*—Jnl. Fr. Inst., Nov.,1912; 22 pp; 75c.

Larkin, H.—*Development and Increase in the Use of Asphaltum.*—Asso. of Engg. Soc's; Jnl.; July,1912; pp. 19-24; 40c.

Mahony, D.—*Occurrence of Bitumen in Victoria;* [Mt. Noorat, a volcanic scoria cone near Terang]. — Australian Mng. Standd., June6,1912; p. 523; 750 w; 35c.

Marcusson, J.—*Unterscheidung von Natur und Erdölasphalt;* [Distinction between natural and petroleum-asphalt].—Chemiker Ztg., July13,1912; p. 801; 3500 w; 30c.

Martell, P.—*Die Asphaltindustrie auf der Insel Trinidad;* [The asphalt industry of Trinidad].—Bitumen, Oct.16, p. 308; 1500 w; 45c.

Milner, W. C.—*History of Albertite* [New Brunswick].—Jnl. Mg. Soc., N. S., Vol. XVII, 1912; p. 62; p. 8; 50c.

Norton, G. H.—*Life and Costs of Asphalt Pavements.*—Engg. News, Sept.26,1912; p. 562; 6000 w*; 25c.

Novarese, V.—*Ueber das Asphaltgebiet des Pescaratales;* [Additional notes on the asphaltic-limestone district of the Pescara valley on the north slope of the Majella Mtns.].—Zts. f. prakt. Geologie, Aug.,1912; p. 326; 500 w; 75c.

Reeve, C. S.—*Effect of Diameter of Bitumen Holder on the Penetration Test.*—Internatnl. Asso. f. Testg. Materials, Vol. II, No. 11; 1912; 4 pp.; 95c.

Richardson, C.—*Trinidad and Bermudez Asphalts and Their Use in Highway Construction.*—Pop. Science Monthly, July, 1912; 17 pp.*; 50c.

Rosati, A.—*Ueber den Fichtelit von Kolbermoor und Wimsiedel in Bayern;* [Fichtelite from Bavaria].—Zts. f. Krystallogr., Jan.,1912; pp. 126-132; 75c.

Scholz, A.—*Untersuchung und Probeverarbeitung bituminösen Schiefer;* [Testing and sample preparation in a bituminous shale].—Chemiker Ztg., Aug.20,1912; p. 943; 1000 w; 35c.

Stremme, Prof.—*Unterscheidung von Asphalten auf primärer und sekundärer Lagerstätte;* [Sapropel genesis of Paleozoic asphalts, and distinction between Paleozoic and later bitumens; read to Deu. Geol. Ges.; brief abstract in].—Glückauf, July27, 1912; p. 1215; 300 w; 45c.

Thiel, G.—*Das Asphaltkalkgebiet des Pescaratales am Nordabhange der Majella;* [The geology and genesis of the asphaltic limestones of Pescara valley, north slope of the Majella, Abruzzi, Italy].—Zts. f. prakt. Geologie, May,1912; p. 169; 16,000 w*; 75c.

Whinery, S.—*Improved Flow-Plate Apparatus for Comparing the Consistency of Bituminous Cements.*—Engg. News, Aug.22, 1912; p. 347; 500 w*; 25c.

Zuber, R.—*Geologische Beobachtungen aus West Afrika;* [Geology of the flysch-like deposits of bitumen and petroleum along the Guinea Coast, W. Africa].—K. K. Geol. Reichs- Anst., Verhandl.; 1911; pp. 89-106.

———. *Die Britische Erdölindustrie von Tuxpan, Mex.*—[The British petroleum industry about Tuxpan, Mex.; from Petroleum Gazt.].—Allgm. Oestr. Chemiker Ztg., Sept.15,1912; p. 141; 1000 w; 45c.

———. *Statistik des Erdharzbetriebes in Galicien für das Jahr,* 1910; [Statistics of ozokerite production in Galicia in 1910].—Oestr. Zts. f. Berg- & H-wesen, June15, 1912; 75c.

———. *The Asphalt Minerals.*—Mines & Minerals, Aug.,1912; p. 47; 1100 w; 35c.

———. *Ueber die neueren Fortschritte und Erfahrungen in der technischen Verwendung der Teerprodukte für Heiz-, Kraft-, und Lichtzwecke;* [Recent progress and experiences in the technical application of tar products for fuel, power and lighting purposes; read to Ver. Deu. Chemiker, May-June, 1912; brief abstract with discussion in] Chemiker Ztg., June6,1912; p. 640; 600 w; 35c.

BARYTES

Alzugaray, B. de.—*Barytes; Composition, Distribution and Production.*—Mining & Engg. World, July6,1912; p. 17; 1500 w; 10c.

Henegar, H. B.—*Baryte Deposits in the Sweetwater District Tennessee.*—Resources of Tenn., Nov.,1912; pp. 424-429*; 50c.

Phalen, W. C.—*Production of Barytes in 1911;* [Mo., Tenn., Ky.; also Ga., N. Car., S. Car., Va.].—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 8 pp.; 15c.

Wittich, L. L.—*Barytes Mining and Preparation in Missouri.*—Mines & Minerals, Sept.,1912; p. 95; 2600 w*; 35c.

———. *Electrostatic Separation of Barite and Sphalerite.*—E. & M. J., Dec.7, 1912; p. 1039; 600 w; 25c.

———. *Nova Scotian Baryte;* [Lake Ainslie, C. B.].—Canadian Mng. Jnl., Sept. 15,1912; p. 661; 1000 w*; 35c.

BAUXITE

See also under Aluminum (Metals).

Stone, S. R.—*Bauxite Brick for Kiln or Furnace Lining;* [Preparation and advantages for lining cement kilns and lead refining furnaces; chiefly on Arkansas product].—Mining & Engg. World, Aug.24,1912; p. 341; 2500 w; 10c.

BISMUTH

Frerichs, F. W.—*Extraction of Bismuth from Carbonaceous Ores.*—Amer. Inst. Cheml. Engrs.; Trans.; Vol. 4; 1912; pp. 90-110; $2.

Gulden, K. R.—*Sind Wismutpräparate giftige Substanzen?* [Are bismuth compounds poisonous materials?].—Heildelberg dissertation; 1912; 35 pp.; $1; (thesis).

Harrington, C. L.—*Mineral Resources of South America.*—See under Copper.

Hess.—*U. S. Production,* 1911.—See Antimony.

Jimenez.—*Estadistica minera en* 1909 *y* 1910, *Peru.*—See under Copper.

Lacey, Wm. N.—*Electrolytic Refining of Silver-Bismuth Alloys;* [Read to Amer. Electro-cheml. Soc.; abstract].—Met. & Cheml. Engg., Nov.,1912; p. 747; 700 w; 35c.

Lazarevic, M., and E. Kittl.—*Die Wismutgänge von Aljin-Dol und Jasikova;* [Geology of the gabbros and bismuth deposits of Aljin-Dol and Jasikova, Servia].—Zts. f. prakt. Geol., July,1912; p. 280-287*; 75c.

Schoch, and Brown.—*Electroanalysis with Acidified Chlorid Electrodes.*—See Antimony.

BORAX AND BORATES

See Salines.

CORUNDUM

See Abrasives.

CRYOLITE

See also Fluorspar.

Böggild, O. B.—*Krystallform und Zwillungsbildungen des Kryoliths, des Perowskits, und des Boracites;* [Crystal form and twinning of cryolite, perowskite and boracite; from "Meddelelser om Grönland," Vol. 50].—Zts. f. Krystallogr., April,1912; pp. 349-429*; 75c.

Starck, G., and E. Thorin.—*Die quantitative Bestimmung des Fluors als Kalziumfluorid;* [Quantitative estimation of fluorine as calcium fluoride].—Zts. f. analyt. Chemie, 1912, No. 1; pp. 14-18; 65c.

DIAMONDS

See Gems.

FERTILIZERS

See also Potash; also Nitrates; also By-Products under "Coking, etc."

Barr, John Allen.—*Florida Phosphate Practice.*—M. & M., Dec.,1912; p. 265; 5000 w*; 35c.

Barr, J. A.—*Tennessee Phosphate Practice;* [Prospecting, sampling, mining; read to Engg. Asso. of the South].—Mines & Minerals, Oct.,1912; p. 152; 4500 w; 35c.

Charpentier.—*Les phosphates tunisiens au Japon;* [Imports of Tunis phosphates into Japan].—Echo d. Mines, Aug.22,1912; p. 927; 300 w; 35c.

Cameron, Frank K.—*Concentration of the Soil Solution.* (Paper read before Eighth Int. Cong. Appl. Chem.; abstract).

—Am. Fert., Nov.16,1912; p. 39; 1500 w; 35c.

Cameron, F. K.—*Present Status of Fertilizer Investigations;* [Read to Natnl. Fertilizer Asso.].—Amer. Fertilizer, July27, 1912; p. 31; 2700 w; 65c.

Curtis, H. E.—*Commercial Fertilizers;* [List of, with analyses].—Kentucky Agric. Experm. Sta., Bull. 158, 1912; pp. 197-328; 50c.

Denis, T. C.—*Annual Report, Quebec Dept. of Mines for* 1911.—See Quebec.

Duisberg, Carl.—*The Latest Achievements and Problems of the Chemical Industry.* (Paper read before Eighth Int. Cong. Appl. Chem.; abstract).—Am. Fert., Nov.16,1912; p. 37; 1500 w; 35c.

Fairchild, J. G.—*The Accurate Volumetric Determination of Phosphoric Acid in Phosphate Rock.*—Jnl. of Ind'l & Engg. Chem'y, July,1912; p. 521; 2000 w; 65c.

Freeth, F. A. and H. E. Cocksedge.—*Perfectionnements à la fabrication du nitrate d'ammonium;* [Improved process of manufacturing ammonium nitrate from ammonium sulphate and sodium nitrate]. —Phosphate, July29,1912; p. 625; 1500 w; 35c.

Fuchs, Wm. and P. Wagner.—*Zur Bestimmung der citronensäurelöslichen Phosphorsäure in Thomasmehlen;* [Determining the citrate-soluble phosphoric acid of Thomas basic phosphate].—Chemiker Ztg., Sept. 12,1912; p. 1037; 2800 w; 35c.

Gale, Hoyt S.—*Occurrence of Nitrate Deposits in Nevada.* (Bulletin 523 U. S. Geological Survey; abstract).—Mg. & Eng. World, Dec.7,1912; p. 1048; 4000 w*; 10c.

Gardner, J. H.—*Rock Phosphate in Kentucky.*—Mines & Minerals, Nov., p. 207; 2200 w*; 35c.

Gladding, T. S.—*Peat as an Agricultural Asset.*—Amer. Peat. Soc., Apr.,1912; pp. 1-9; $1.45.

Hartleb, Dr.—*Beiträge zur Konstitution der Thomasschlacke;* [Composition of Thomas phosphatic slag].—Zentralbl. f. Kunstdünger Ind., July21,1912; p. 1227; 1500 w; 35c.

Job, P.—*Réduction électrolytique de l'acide phosphorique et de l'acide arsénique;* [Electrolytic reduction of phosphoric and arsenic acid].—Laval, 1912; 11 pp; (pamphlet).

Jumeau, P.—*A Modern Phosphate Plant;* [Deposits and plant of Cie. Générale des Phosphates de la Floride, Pembroke, Fla.]. —Amer. Fertilizer, July13,1912; p. 44; 750 w*; 25c.

Kappen, H.—*Die Zersetzung des Cyanamids durch mineralische Bodenbestandteile;* [Decomposition of cyanamide by soil constituents].—Zentralbl f. Kunstdünger Ind., July21,1912; p. 234; Aug.7, p. 248; 3300 w; 50c.

Klinkerfues, Fr.—*Fortschritte in der analytische Praxis der Kunstdüngerindustrie;* [Recent noteworthy advances in analytic practice in the fertilizer industries].—Zentralbl. d. Kunstdünger-Ind., July7,1912; p. 208; 3600 w; 35c.

Kossowitsch, P. — *Die Schwarzerde, "Tschernosiom";* [The Russian phosphatic black earths "Tschernosiom"]. — Berlin, 1912; 156 pp*; $3 (book).

Liechti, P.—*Ueber Vegetationsversuche mit Palmaerphosphat;* [Tests of Palmaer phosphate; read to Schweiz. Ver. Analyt. Chemiker; brief abstract].—Chemiker Ztg., July23, p. 842; 200 w; 35c.

Lipman, C. B.—*Effect of Ignition on the Solubility of Soil Phosphates.*—Jnl. of Ind'l & Engg. Chemy., Sept.,1912; p. 663; 1500 w; 65c.

Machalske, F. J.—*The Progress of the Fertilizer Industry. A Resumé of Patents Relating to the Production of Fertilizers in U. S. up to* 1910.—Philadelphia; 1912; 40 pp; $1.50 (book).

Meyer, D.—*Die Anwendung der kalkhaltigen Dingemittel in der Praxis;* [The practical methods of application of lime fertilizers; from Illustr. Landwirts, Ztg.;].—Zentralbl. f. Kunstdünger Ind., Sept.21,1912; p. 315; 2500 w; 35c.

Moore, H. C.—*The Mixing of Fertilizers; Superiority of Factory-Mixed Goods.*— Amer. Fertilizer, Sept.7,1912; p. 31; 3600 w; 25c.

Neubauer, H., and F. Lücker.—*Ueber die von Lorenz'sche Methode der Phosphorsäurebestimmung;* [Notes on the von Lorenz method of phosphoric acid estimation. —Zts. f. analyt. Chemie, 1912, No. 3-4; pp. 161-174; 65c.

Palmaer, W.—*Method of Producing Bicalcic Phosphate with the Help of Electrolytically Produced Acid and Alkali;* [Read to Internatnl. Congr. of Appl. Chem'y].— Met. & Chemi. Engg., Sept. Suppl., 1912; p. 581; 2500 w; 35c.

Parsons, Chas. L.—*The Waste of Fertilizer Materials* (Bull. Bu. of Mines; abstract).—Am. Fertilizer, Nov.30,1912; p. 48; 3000 w; 35c.

Popp, M.—*Die lösliche Kieselsäure in Thomasmehlen und ihr Einfluss auf die Bestimmung der citronensäurelöslichen Phosphorsäure;* [Soluble silica in Thomas basic phosphate and its influence in estimating the citrate-soluble phosphate content].—Chemiker Ztg., Sept.24,1912; p. 1102; 600 w; 35c.

Popp, M.—*Eine zuverlässige Methode zur Bestimmung der citronensäurelöslichen Phosphorsäure in Thomasmehlen;* [Dependable method of estimating citrate-soluble phosphoric acid in Thomas phosphatic-slag fertilizers].—Chemiker Ztg., Aug.17,1912; p. 937; 1000 w; 35c.

Rindell, A.—*Löslichkeitsbestimmungen in der Agrikulturchemie;* [Solubility determination in phosphates and other agricultural materials].—Zentralbl. f. Kunstdünger Ind., Sept.7,1912; p. 289; 3600 w; 35c.

Schmid, H. S. de.—*Phosphate and Feldspar Deposits of Quebec and Ontario.*—Canada Dept. Mines, Mines Branch, Rep. f. 1911; 1912; pp. 117-122; $1.

Schulz, W. A.—*Guano Supply of French Somaliland.*—U. S. Consul. Rep., July11, 1912; p. 189; 400 w; 20c.

Stansfield, J.—*Certain Mica, Graphite and Apatite Deposits of the Ottawa Valley.*— Canada Geol. Survey, Rep. f. 1911; 1912; pp. 280-285.

Storsberg, Otto.—*Der Dolomitkalk als Düngemittel;* [Dolomitic lime as fertilizer]. —Tonindustrie Ztg., Nov.2,1912; p. 1740; 1200 w; 35c.

Vinnassa de Regny, P.—*Lybia Italica.*— See under North Africa.

Waggaman, W. H.—*Phosphate Deposits of the U. S.;* [Flor., Tenn., S. Car., Ark., Ky., and western states; read to Natnl. Fertilizer Asso].—Amer. Fertilizer, July27, 1912; p. 34; 3000 w; 65c.

Walker, C. R.—*Basic Slag Works at Sydney, N. S.;* [Cross fertilizer plant connected with Bessemer furnaces of Dominian Iron & Steel Co.].—Canadian Mng. Jnl., Sept.15,1912; p. 608; 600 w*; 35c.

Zeys, P.—*Mines, Carrières et Phosphates*

en Tunisie; [Tunis, its mines, quarrying and phosphate industries].—Paris, 1912; map; no text; $1.50.

Zeys, P.—*Mines, Carrières et Phosphates en Tunisie; Législation et Industrie;* [Mines, quarries and phosphate deposits of Tunis].—Paris and Nancy, 1912; 130 pp.; $3; (book).

Abstract describing secondary phosphate deposits in "Phosphate," June24,1912; p. 519; 1000 w; 35c.

Asso. of Official Agric. Chemists.—*29th Annual Convention;* [Proceedings and reports].—Amer. Fertilizer, Sept.21,1912; p. 21; 5000 w; 25c.

Ch. P.—*La fabrication du superphosphate; quantitiés d'acide;* [Determining the quantity of sulphuric acid to be used with various phosphate rocks and guanos in manufacturing supers].—Phosphate, Sept.23, 1912; p. 803; 600 w; 25c.

L. B.—*Le guano et son commerce;* [Guanos and the guano industry].—Phosphate, Oct.14, p. 873; Oct.21, p. 897; 2100 w; 50c.

———. *A New Departure in the Manufacture of Agricultural Phosphates;* [Newberry calcination process at high temperatures on dry ground phosphate rock producing citrate-soluble phosphate].—E. & M. J., Aug.31,1912; p. 385; 1200 w; 25c.

———. *Der Kunstdünger Markt im Jahre 1911;* [Review of the German fertilizer market and trade in 1911].—Zentralbl f. Kunstdünger-Ind., Oct.21, p. 355; 1000 w; 35c.

———. *Düngemittel in Australien;* [Fertilizer trade and consumption in Australia].—Zentralbl. f. Kunstdünger Ind., Sept.7, 1912; p. 295; 1200 w; 35c.

———. *Fertilizers in Russia.*—Amer. Fertilizer, Oct.19, p. 56; 1200 w; 25c.

———. *La exploitacion del guano de las islas;* [The guano industry of the Peruvian islands].—"La Riqueza Agricola" (Lima), Aug.,1912.

———. *La Société Anglo-Espagne Cooper de Superphosphates;* [Cooper Anglo-Spanish Superphosphate Co.; works at Seville and Alicante, and costs of production].—Phosphate, July22,1912; p. 603; 1000 w; 35c.

———. *La Valeur Fertilisant de Quelques Matières Phosphatées;* [The fertilizing value of some phosphates].—Le Phosphate, Dec.2,1912; p. 1041; 1100 w; 35c.

———. *L'utilisation des phosphorites de la Russe centrale;* [The phosphate deposits of central Russia and their utilization].—Phosphate, July15,1912; p. 584; 1200 w; 35c.

———. *Potash in Nebraska.*—Am. Fertilizer, Nov.30,1912; p. 54; 750 w; 35c.

———. *Russian Fertilizer Situation;* [Imports and consumption of phosphorites, slag, and superphosphate, 1907-1911].—Amer. Fertilizer, July13,1912; p. 38; 1200 w; 25c.

———. *Statistique de production et de consommation des engrais dans le monde;* [Statistics of world's consumption and production of fertilizers].—Phosphate, Aug.19, 1912; p. 690; tables; 35c.

———. *The Determination of Phosphorus or Phosphoric Anhydride;* [Armour Inst. methods].—Chemi. Engr., Sept.,1912; p. 119; 1500 w; 35c.

———. *U. S. Consumption of Mineral and Other Fertilizers;* [Statistics by states, 1910 and 1911].—Mining & Engg. World, Aug.17,1912; p. 282; 100 w; 10c.

FELDSPAR

See Quartz.

FLOURSPAR

See also Cryolite.

Burchard, E. F.—*Production of Fluorspar and Cryolite in* 1911; [in U. S. and England].—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 11 pp.; 20c.

Drawe, —. *Fluoranalysen;* [Analysis of fluorine].—Zts. f. angew. Chemie, July5, 1912; pp. 1371-1372; 50c.

Fohs, F. J.—*The Kentucky Fluorspar Industry in* 1910.—Ky. Inspector of Mines

FULLER'S EARTH

Branner, J. C.—*An Early Discovery of Fuller's Earth in Arkansas.*—Amer. Inst. Mng. Engrs., Bull. 67; July,1912; pp. 747-750; $1.15.

Miser, N. D.—*Developed Deposits of Fuller's Earth in Arkansas.*—U. S. Geol. Survey, Bull. 530-Q; 1912; 16 pp*; 20c.

Wesson, D.—*The Bleaching of Oils with Fuller's Earth;* [Read to Amer. Inst. Chemi. Engrs.].—Mining & Engg. World, Oct.12, p. 667; 2100 w; 20c.

E. G.—*Erdöl-Filtrierung und Reiningun durch Erden;* [Fuller's earth and the filtration and purification of oils].—Allgm. Oestr. Chemiker Ztg., Aug.15,1912; p. 125; 1000 w; 45c.

GEMS

For garnets, see under Abrasives.

Anderson, G. E.—*Jade Market in China Depressed.*—U. S. Consul. Rep., Sept.23, 1912; p. 1510; 750 w; 20c.

Barnitzke, J. E.—*Development of Diamond Recovery Methods;* [Washing German S. W. Africa gravels].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 275; 3000 w*; $1.

Brock, R. W.—*Tin and Topaz in New Brunswick.*—Jnl. Mg. Soc., N. S., Vol. XVII, 1912; p. 50; 4 p.; 50c.

Camsell, C.—*Notes on the Occurrence of Diamonds at Tulameen and Scottie Creek, near Ashcroft, B. C.*—Canada Geol. Survey, Rep. f. 1911; pp. 123-125.

Derby, O. A.—*Speculations Regarding the Genesis of the Diamond, II.*—Jnl. of Geol'y, July-Aug.,1912; pp. 451-456; 65c.

Draper, D.—*The Origin of Alluvial Diamonds.*—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 53; 4000 w*; $1.

Draper, D.—*Earliest Discoveries of Diamonds in Cape Colony and the Transvaal.*—S. Afr. Mng. Jnl., Anniversary No., Sept., 1912; p. 99; 1600 w; $1.

Eppler, Alfr.—*Die Schmucksteine und die Schmuckstein-Industrie;* [Precious and ornamental stones and their preparation].—Leipzig, 1912; 87 pp.; 64 figs.; 75c (book).

Fuller, J. T.—*Mining Methods at Kimberley.*—E. & M. J., Nov.9, p. 887; Nov.16, p. —; 9000 w*; 40c.

Godwin, J.—*Sapphire Mines of Northern Kashmir.*—Mines & Minerals, Oct.,1912; p. 174; 1200 w*; 35c.

Harger, H. S.—*The Great Diamond Industry of South Africa;* [Mining and treatment at De Beers, Premier and other producers].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 251; 7000 w*; $1.

Harrington, C. L.—*Mineral Resources of South America.*—See under Copper.

Harris, Sir D.—*New Jagersfontein;* [Annual report for 1911-1912].—Afr. World, Aug.3,1912; p. 778; 1200 w; 35c.

Hatch, F. H.—*Diamantiferous Gem Gravel, W. Coast of Africa;* [From Jiblong and Bor rivers, 30 miles from Monrovia, Liberia].—Geol. Mag., March,1912; p. 106; 3000 w*; 65c.

Hirshberg, Dr. L. K.—*Liquid Diamonds, Emeralds, Glass and Other Crystals.*—Mg. & Eng. World, Dec.7,1912; p. 1047; 1000 w; 10c.

Hirshberg, L. K.—*Black Diamonds of South America.*—Mg. & Eng. World, Nov. 16,1912; p. 909; 350 w; 10c.

Jahn, A.—*Topas von Japan;* [Some topazes from Tanokami Yama, province of Omi, Japan].—Zts. f. Krystallogr., Jan., 1912; pp. 136-138; 1000 w*; 75c.

Lebrun, J. M. and R. Nicaise.—*La réproduction artificielle du diamant;* [Artificial reproduction of the diamond].—Chimiste, April.1912; p. 61; 5000 w; 75c. Abstract in Rev. d'Electrochimie, June, p. 168; July, p. —; 3000 w; 75c.

Letcher, Owen.—*The Great Mines of Africa; DeBeers Con.;* [This is the fourth article of the series].—Mg. & Eng. World, Nov.23.1912; p. 955; 3000 w; 10c.

Mastin, J.—*Chemistry Properties and Tests of Precious Stones.*—New York, 1912; 114 pp.; $1; (book).

Miller, Wm. J.—*Garnet Deposits of Warren County, N. Y.* (Abstracted from Economic Geology, Aug., 1912).—Mg. & Eng. World, Dec.14,1912; p. 1084; 1200 w; 10c.

Molengraaff, G. A. F.—*Story of the "Cullinan" Diamond.*—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 97; 600 w; $1.

Müller, E.—*The German S. W. Africa Diamond Fields;* [From British consul's report].—S. Afr. Mng. Jnl., Sept.7,1912; p. 14; 1000 w; 35c.

Müller, H.—*Krystallographische Untersuchungen am Turmalin aus Brasilien;* [Crystallographic studies on some Brazilian tourmalines].—Würzburg, 1912; $2 (book).

Paige, S.—*Origin of Turquoise in the Burro Mountains, N. Mex.*—Econ. Geol'y, June,1912; pp. 382-392*; 65c.

Peters, R. B.—*Das Bergwesen in Deutsch Südwestafrika;* [Mining law in German Southwest Africa]. — Swakopmund,1912; 464 pp; 2 maps; $3.50 (book).

Reunert, Th.—*Early Days on the Diamond Fields;* [in South Africa].—S. Afr. Mng. Jnl., Anniversary No., Sept., 1912; p. 209; 3500 w*; $1.

Rogers, A. F.—*Rare Minerals in California.*—Columbia School of Mines Quar'ly, July,1912; pp. 373-381; 65c.

Schwarz, E. H. L.—*South African Geology.*—London, 1912; pp. — (book).

Smit, J. K.—*Brazilian Carbons.*—Mines & Minerals, July,1912; p. 732; 1600 w; 35c.

Sterrett, D. B.—*Gems and Precious Stones in* 1911; [Agate, amethyst, bowenite, californite (vesuvianite), chrysoprase, beryl, diamond, emerald, garnet, jasper, lazulite, opal, quartz, rhodonite, sapphire, tourmaline turquoise, variscite in U. S., (Cal., Colo., Oreg., Mont., Utah, N. Car., Ark., Ariz., Tex., Ill., N. Hamp., Nev., N. Mex., Me.).; with notes on Brazilian beryl, African diamonds and Mexican opals].—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 46 pp.; 10c.

Stokes, Ralph.—*Premier Diamond Mine.*—Mg. Mag., Nov.,1912; p. 366; 5500 w*; 45c.

Vogt, T.—*Bertrandit von Iveland im südlichen Norwegen;* [Bertrandite occurrence in the pegmatite veins of Sätersdalen, southern Norway].—Zts. f. Krystallogr., Dec.,1911; pp. 6-13*; 75c.

Wagner, P. A.—*Diamond Occurrences in Pretoria District;* [Read to Geol. Soc. of S. Afr.; extracts].—S. Afr. Mng. Jnl., Aug. 3,1912; p. 847; 4000 w*; 35c.

Yerby, W. J.—*Diamond Mining Profits in South Africa;* [from U. S. Consul. report].—Mining & Engg. World, July6,1912; p. 6; 600 w; 10c.

Zealley, A. E. V.—*Geological Notes on a Traverse from Gwelo to Bulawayo;* [Includes notes on Willoughby's Spur gem gravels; from S. Rhodesia Geol. Survey report for 1911].—S. Afr. Mng. Jnl., Oct. 12, p. 191; Oct.19, p. —; 4000 w; 50c.

———. *At a Diamond-Cutting Establishlishment, Amsterdam.*—Mng. World (London), Sept.28,1912; p. 374; 600 w; 35c.

———. *Diamond Cutting Industry; How the Stones Are Cut and Polished.*—S. Afr. Mng. Jnl., Aug.31,1912; p. 986; 1200 w; 35c.

———. *Diamond Fields of Pretoria;* [Derdepoort district].—M. & S. P., Oct.19, p. 503; 400 w; 20c.

———. *Diamond Workings of British Guiana.* (Report of Inst. of Mines and Forests British Guiana.)—Mg. & Eng. World, Dec.21,1912; p. 1137; 2000 w; 10c.

———. *Diamantes, yacimientos, extracción, tratamiento, venta y utilización;* [Diamonds, their occurrences, extraction, treatment, sale and use].—Rev. Minera, Aug.8,1912; p. 373; 2500 w; 35c.

———. *Diamond Production for the Half-Year;* [Statistics for Transvaal, Cape and O. F. S. districts].—S. Afr. Mng. Jnl., Aug. 31,1912; p. 984; 500 w; tables; 35c.

———. *Gold and Diamonds in British Guiana;* [Deposits and working conditions; from report of Committee on Permanent Exhibitions].—M. & S. P., Aug.3,1912; p. 144; 1600 w; 20c.

———. *Graphite et pierres précieuses à Madagascar;* [Graphite and precious stones at Madagascar].—Echo d. Mines, Oct.21, p. 1100; 1500 w; 35c.

———. *La isla de las piedras preciosas;* [Gem industry of Ceylon; diamonds, emeralds, sapphire, peridote, ruby, etc.].—Madrid Cientif., Aug.15,1912; p. 488; 800 w*; 45c.

———. *Le Diamant Artificial;* [The artificial diamond].—Revue Industrielle, Nov. 23,1912, p.15; 800 w; 25 cts.

———. *New Jagersfontein and the Diamond Outlook;* [Editorial discussion of report for 1911].—S. Afr. Mng. Jnl., June29, 1912; p. 644; 1000 w; 35c.

———. *New Diamond Discoveries;* [Derdepoort, Puntlyf, Granaatplaats; also Kleinsonderhout].—S. Afr. Mng. Jnl., July 6,1912; p. 689; 2000 w; 35c.

———. *New Diamond Prospects;* [Droogespruit farm, Potchefstroom district; Schuilplaats No. 532, Boshof district, O. F. S.].—S. Afr. Mng. Jnl., Oct.19, p. 209; 500 w; 35c.

———. *Rubies and Ruby Mining;* [Heaton artificial stones; ruby-sapphire mining at Mogok, Burma].—M. & S. P., Sept.7, 1912; p. 310; 700 w; 20c.

———. *S. African Coal and Diamonds;* [Recent developments at Derdeport, Roode-

plaat, Bloemhof, Mooifontein, Blaauwbosch].—Afr. World, Aug.24,1912; p. 129; 1000 w; 35c.

———. *South Africa;* [Gold and diamond mining in 1911; review of official report].—Mng. Jnl., Oct.19, p. 1015; 3500 w; 35c.

———. *The Derdepoort Geological Problem;* [Petrology of the hard blue rock; breccia or kimberlite?].—S. Afr. Mng. Jnl., July27,1912; p. 805; Aug.24, p. 950; 3000 w; 50c.

———. *The Diamond Diggings;* [Recent developments at Mooifontein, Bloemhof, Rietput, Barkly West, Droogevelt, May, and Phoenix].—S. Afr. Mng. Jnl., Sept.28, p. 105; 1200 w; 35c.

———. *The Year with De Beers.*—S. Afr. Mng. Jnl., Oct.19, p. 210; 1600 w; 35c.

———. *Turner Emerald Mine, Shelby, N. Car;* [from U. S. Geol. Survey bulletin].—E. & M. J., July27,1912; p. 152; 400 w; 25c.

GRAPHITE

Archbutt, L., and R. M. Deeley.—*Lubrication and Lubricants.*—London, 1912 (3d edition); 336 pp.; $7.50; (book).

Bastin, E. S.—*The Graphite Deposits of Ceylon.*—Econ. Geol'y, Aug.,1912; pp. 419-443*; 65c.

Beattie, H. M.—*Acme Graphite Mines and Mills;* [Byers, Penna.].—E. & M. J., July20,1912; p. 115; 3800 w*; 25c.

Borchers. — *Metallurgic Progress at Aachen,* 1902-1912; [in German].—See Aluminum.

Brumell, H. P. H.—*Graphite Mining and Milling in Quebec.*—Canadian Mng. Jnl., July1,1912; p. 433-437; 3000 w*; 25c.

Burchard, E. F.—*The Gypsum Industry in* 1911; [Statistics of production, etc., in U. S.].—U. S. Geol. Surv., Mineral Resources f. 1911; 1912; 8 pp.; 20c.

Burkhardt, W. — *Lösungserscheinungen an Anhydrit;* [Some experiments on the solubility of anhydrite].—Zts. f. Krystallogr., Feb.,1912; pp. 209-230*; 75c.

Davies, F. H.—*Artificial Graphite and Electrolysis;* [Discusses the use of graphite electrodes in electrolytic processes].—El. Rev. (London), Aug.23,1912; p. 293; 1600 w*; 35c.

Day, A. L., and R. B. Sosmon.—*The Expansion Co-Efficient of Graphite.*—Jnl. of Ind'l & Engg. Chem'y, July,1912; p. 490; 2000 w*; 65c.

Denis, T. C.—*Annual Report, Quebec Dept. of Mines for* 1911.—See Quebec.

Hinterlechner, K.—*Geologische Mitteilungen ueber ostböhmische Graphite;* [Geological notes on the east Bohemian graphites and their stratigraphic significance over a part of the Bohemian crystalline massif].—K. K. Geol. Reichs-Anst., Verhandl., 1911, No. 16; pp. 365-380*; $2.

Hornaday, W. D.—*The Santa Maria Graphite Mines, Mexico.*—Mg. & Eng. World, Dec.7,1912; p. 1041; 3000 w*; 10c.

Lee, W. T.—*Graphite near Raton, N. Mex.*—U. S. Geol. Survey, Bull. 530-L; 1912; pp. 3-6; 10c.

Skinner, R. P., and others.—*Graphite Industry and Trade;* [German and Spanish trade; Ceylon and Korea deposits].—U. S. Consul. Rep., June25,1912; p. 1301; 2000 w; 20c.

Stansfield, J.—*Certain Mica, Graphite and Apatite Deposits of the Ottawa Valley.*—Canada Geol. Survey, Rep. f. 1911; 1912; pp. 280-285.

Steele, E. G.—Viccissitudes of Graphite Mining; [Discusses S. S. & S. dry-concentrating table].—E. & M. J., July13,1912; p. 53; 250 w; 25c.

———. *Graphit-Gewinnung in Ceylon.*—Ton Industrie Ztg., Aug.29,1912; p. 1401; 750 w*; 35c.

———. *Graphite et pierres précieuses à Madagascar;* [Graphite and precious stones at Madagascar].—Echo d. Mines, Oct.21, p. 1100; 1500 w; 35c.

———. *Graphite in Korea.*—Coal Age, Aug.31,1912; p. 393; 300 w; 25c.

———. *The Proper Handling of Crucibles.*—Mechl. World, Aug.30,1912; p. 106; 1200 w; 35c.

GYPSUM

Burchard, E. F.—*The Gypsum Industry in* 1911; [Statistics in U. S., N. Y., Iowa, Ohio, Va., Alaska, Ariz., Cal., Colo., Kans., Mich., Nev., N. Mex., Oreg., Okla., S. Dak., Tex., Utah, Wyom.].—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 8 pp.; 10c.

Cole, L. H.—*The Gypsum and Salt Industries of Central and Western Canada.*—Canada Dept. Mines, Mines Branch, Rep. f. 1911; 1912; p. 108-116.

Cramer, E.—*Französischer und deutscher Gips;* [French and German gypsum].—Ton-Industrie Ztg., June15,1912; p. 964; 1500 w; 35c.

Kramm, H. E.—*Gypsum of New Brunswick;* [and Nova Scotia].—Canada Geol. Survey, Rep. f. 1911; 1912; pp. 322-328.

Lupton, Chas. T.—*Gypsum Along the West Flank of the San Rafael Swell, Utah.*—U. S. Geol. Survey, Bull. 530-N; 1912; pp. 3-14*; 10c.

Moye, A.—*Der Gips in den Vereinigten Staaten;* [Gypsum in the U. S.].—Ton Industrie Ztg., Aug.15,1912; p. 1323; 600 w*; 35c.

Reinbold, K.—*Natürlicher Gipsstein als Baustoff;* [Availability of raw gypsum rock as structural material].—Ton Industrie Ztg., July20,1912; p. 1177; 500 w; 35c.

Stose, Geo. W.—*Geology of the Salt and Gypsum Deposits of Southwestern Virginia.*—U. S. Geol. Survey, Bull. 530-N; 1912; pp. 14-37*; 10c.

Weidner, —. *Gips als Feuerschutzmittel;* [Use of gypsum as fireproof material; read to Deu. Gipsverein].—Ton Industrie Ztg., July20,1912; p. 1180; 2000 w; 35c.

———. *Aus der süddeutschen Gipsindustrie;* [Notes on the South German gypsum industry].—Ton Industrie Ztg., July30,1912; p. 1231; 1500 w; 35c.

———. Electricity in Plaster and Lime Plants.—El. Rev. (Chicago), Oct.12, p. 679; 3000 w*; 20c.

———. *Gips und Witherit;* [Witherite and the water-proofing of gypsum].—Ton Industrie Ztg., Aug.27,1912; p. 1392; 600 w; 35c.

———. 40 *Trains of Gypsum in One* Rep., 1912; pp. 22-27.

IODINE

See "Salines and Alkalis."

MAGNESITE

Burlton, C. H. B.—*Magnesian Cement in India.*—Roy. Soc. of Arts, Jnl.; July26, 1912; p. 851-864; 9000 w; 35c.

Canaval, R.—*Das Magnesit-Vorkommen von Trens bei Sterzing in Tirol;* [Austrian magnesites and the deposits at Trens near Sterzing in the Tirol].—Zts. f. prakt. Geologie, Aug.,1912; p. 320; 5000 w; 75c.

Gale, H. S.—*The Production of Magnesite in* 1911; [In California; describes several new localities].—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 17 pp.*; 20c.

Friedrich.—*Reactions in Roasting of Carbonates;* [in German].—See under Lead.

Roast, H. J.—*The Magnesite Deposits of Grenville Township, Quebec.* — Canadian Mng. Jnl., July1,1912; p. 445; 1000 w*; 25c.

———. *La magnesita;* [Notes on magnesite; its occurrences and preparation].—Rev. Minera, Oct.1, p. 459; 1000 w; 35c.

MICA

Berndt, G.—*Determinación de la emanación radioactiva en las fuentes;* [Methods of determining radio-activity of mineral springs].—Soc. Cient. Argentina, Anales, Feb.,1912; pp. 49-92; 75c.

Duncan, G. S.—*Contribution to the Study of Pre-Cambrian Rocks of the Harney Peak District of S. Dakota;* [Mica and tin-bearing granites, and pegmatite and quartz lenses].—Amer. Inst. Mng. Engrs., Bull. 67, July,1912; pp. 751-762*; $1.15.

Fleming, A. P. M.—*The Use of Mica in the Insulation of Electrical Apparatus.*—El. Rev. (London), Sept.27,1912; p. 514; 1400 w; 35c.

Milford, L. R.—*Recent Analyses of the Saratoga Mineral Waters;* and, *Determination of Lithium.*—Jnl. of Ind'l & Engg. Chem'y, Aug.,1912; p. 593; p. 595; 3500 w; 65c.

de Schmid, H.—*Mica; Its Occurrence, Exploitation, and Uses;* (2d edition].—Canada Dept. Mines, Mines Branch; Paper No. 118; 1912; 411 pp.*; $1; (book).

de Schmid, H. S.—*Mica Mining in the Province of Quebec.*—Canadian Mng. Jnl., July1,1912, p. 423; 3000 w; 25c.

Stansfield, J.—*Certain Mica, Graphite and Apatite Deposits of the Ottawa Valley.*—Canada Geol. Survey, Rep. f. 1911; 1912; pp. 280-285.

Sterrett, D. B.—*Mica in Idaho, New Mexico and Colorado;* [In Latah, Rio Arriba and Mesa counties, respectively].—U. S. Geol. Survey, Bull. 530-L; pp. 7-22*; 10c.

Wiggins, F., and Sons.—*The Use of Mica in the Insulation of Electrical Apparatus.*—El. Rev. (London), Oct.11, p. 564; 1800 w*; 35c.

———. *Minerals of the Murchison Range, Transvaal,* 3: *Mica and Corundum Deposits.*—S. Afr. Mng. Jnl., June29, p. 655; July6, p. 700; July13, p. —; 4500 w; 70c.

———. *Mining Prospects in the Low Country;* [Murchison range, Transvaal; gold, mica, corundum].—S. Afr. Mng. Jnl., July13,1912; p. 742; 2000 w; 35c.

MINERAL WATERS

Almera, J.—*Historia natural relativa al sitio en que brotan les aguas minero-medicinales de Vallfogona de Riucorp;* [The mineral healing springs of Vallfogona de Riucorp; geology and natural history].—Inst. Geol. Espana, Bol., Vol. 32, 1911; 1912; pp. —.

Bobo-Diez, I.—*Las Aquas Minerales y las Entermedadas;* [Mineral Waters].—Valladolid, Spain; 1912; 296 pp.; $1.50 (book).

Crema, C.—*Acque saliente della Liguria orientale e del la Lunigiana;* [Saline underground waters of eastern Liguria and Lunigiana].—Ital. R. Comit. Geol., Bol.; No. 4, Vol. 42; 1912; 67 pp.*; $1.

Diénert, P.—*Eaux Douces et Eaux Minérales;* [Fresh Waters and Mineral Waters].—Paris, 1912; pp. —; 45 figs.; $1.50 (book).

Gäbert, C.—*Die Arsen-Heilquelle "Jeremiasglück" in Garnsdorf bei Saalfeld a. S.* [The arsenical healing spring "Jeremiasglück" at Garnsdorf on the Saar].—Zts. f. Balneologie, 1912; p. 73-82; 75c.

Garnaux, P. J.—*Etude des sédiments et dépots des eaux minérales de la Limagne et de l'Auvergne;* [Mineral waters and deposits of Limagne and Auvergne, France].—Paris, 1911; 82 pp.*; $3 (book).

Häberle, D.—*Die Mineralquellen der Rheinpfalz und ihrer nächsten Nachbargebiete in geologisch-historischer Beziehung;* [Geology and history of the mineral springs in the Rheinpfalz region, south Germany].—Kaiserslautern, 1912; 103 pp.*; $1.50 (book).

Hackl, O.—*Chemischer Beitrag zur Frage der Bildung natürlicher Schwefelwässer und Säuerlinge;* [Chemical notes on the problem of genesis of sulphur and acidulated natural waters].—K. K. Geol. Reichs Anst. Wien, Verhandl. f., 1911; No. 16; pp. 380-385; $2.

Schubert, R. J.—*Ueber die Thermen und Mineralquellen Oesterreichs;* [The thermal and mineral springs of Austria].—K. K. Geol. Reichs-Anst., Verh. f., 1911; No. 17; pp. 419-422; 75c.

Schwager, A.—*Mineralwasser in Niederbayern;* [Mineral waters of lower Bavaria]. Geogn. Jahresh., 1911; pp. 193-207; 75c.

Steuer, —. *Bildung von Mineral und Grundwasser in der Wetterau;* [Genesis of the Wetterau, Germany].—Jnl. f. Gasbeleuchtg., Oct.26, pp. 1054-1057; 50c.

NITRATES AND NITROGEN

Bernthsen, H. A.—*Synthetic Ammonia; The Haber Process of the Badische Co.;* [Read to Internatnl. Congr. of Appl. Chem'y; abstract].—Met. & Chemi. Engg., Sept.,1912; p. 637; 5000 w; 35c.

Caracristi, C. F. Z.—*Notes on Nitrate, with Special Reference to the Nitrate Beds of Chile.*—Mex. Mng. Jnl., Sept.,1912; p. 35; 4000 w*; 25c.

Dafert, F. W.—*Die gegenwartige Lage der Industrie der künstlichen Stickstoffdünger;* [Status of the artificial nitrogen fertilizer industry].—Zentralbl. f. Kunstdünger-Ind., June7,1912; p. 177; June21, p. —; 3500 w; 50c.

Diaz-Ossa, B.—*L'industrie du nitrate de soude au Chile;* [Nitrate of soda industry of Chile; chemical lecture before College de France].—Phosphate, July29,1912; p. 621; 1500 w; 35c.

Dinslage, E.—*Analyse von Norgesalpeter, Kalkstickstoff und Stickstoffkalk;* [Chemical analyses of Norwegian calcium nitrate and cyanamide].—Zentralbl. f. Kunstdünger Ind., Sept.21,1912; p. 311; 2500 w; 35c.

Dobbelstein, O.—*Luftsalpetersäure aus Koksofengasen;* [Atmospheric nitrogen from coke-oven gases; read to Allgm. Bergmannstag, Vienna, Sept., 1912; abstract].—Montanist. Rundschau, Sept.15,1912; p. 959; 1000 w; 50c.

Eyde, Sam.—*Oxidation of Atmospheric Nitrogen and the Development of the Resulting Industries of Norway;* [Read to Internatnl. Congr. of Appl. Chem'y; abstract].—Met. & Cheml. Engg., Sept.12,1912; p. 617; 2100 w; 35c.

Ferry, —. *Verbesserter Apparat zur Stickstoffbestimmung;* [Improved apparatus for estimation of nitrogen].—Zts. f. analyt. Chemie, 1912, No. 6, p. 367; 100 w*; 65c.

Freeth, F. A. and H. E. Cocksedge.—*Perfectionnements à la fabrication du nitrate d'ammonium;* [Improved process of manufacturing ammonium nitrate from ammonium sulphate and sodium nitrate].—Phosphate, July29,1912; p. 625; 1500 w; 35c.

Gale, Hoyt S.—*Occurrence of Nitrate Deposits in Nevada* (Bulletin 523 U. S. Geological Survey; abstract).—Mg. & Eng. World, Dec.7,1912; p. 1048; 4000 w*; 10c.

Gale, H. S.—*Nitrate Deposits;* [Chile and U. S. (Wyom., Colo., Utah, Idaho, Oreg., Nev., Cal., Ariz., N. Mex., Tex.), B. C.; geology].—U. S. Geol. Survey, Bull. 523; 1912; 36 pp.*; 10c.

Garrels, A.—*Sicilian Sulphur Industry;* [Developments in 1911].—U. S. Consul Rep., Aug.21,1912; p. 936; 500 w; 20c.

Hardtung, H.—*Beiträge zur Kenntnis der Metallnitride;* [Notes on the metal nitrides].—Erlangen dissertation, 1912; 66 pp*; $1.50.

Harrington, C. L.—*Mineral Resources of South America.*—See under Copper.

Häusser, —. *Neue Versuche über die Stickstoffverbrennung in explodierenden Gasgemischen;* [Häusser system of nitrogen combustion in explosive gas mixtures, with illuminating gas, carbon monoxide and coke-oven gas].—Ver. Deu. Ingr., Zts.; July 20,1912; pp. 1157-1164*; 75c.

Jaeger, F. M., and H. J. Fornbosch.—*Die Jodide der Elemente aus der Stickstoffgruppe;* [The iodides of the nitrogen group of elements].—Zts. f. anorgan. Chemie, 1912, No. 3; pp. 261-271*; $1.15.

Kirchoff, A.—*Zur Analyse des Kalkstickstoffs;* [Analysis of calcium cyanamide].—Chemiker Ztg., Sept.17,1912; p. 1058; 500 w; 35c.

Kroczek, A.—*Bildung des atmosphärischen Stickstoffes in Natur und Technik;* [Production of atmospheric nitrogen in nature and artificially].—Zentralbl. f. Kunstdünger Ind., Oct.7, p. 341; Oct.21, p. —; 3000 w; 50c.

Lefranc, L. — *Atmospheric Nitrogen.*—Amer. Fertilizer, Sept.7,1912; p. 44; 1500 w; 25c.

Norton, T. H.—*Utilization of Atmospheric Nitrogen.*—U. S. Bur. of Manufactures, Publication; 1912; 178 pp*; 50c.

Ramsay, Sir Wm.—*The Manufacture of Nitrates from the Atmosphere;* [Discussion Schönherr, Guye, etc., patents].—Roy. Soc. of Arts, Jnl., June14,1912; p. 756; 2000 w; 35c.

Tucker, S. A., and H. L. Read.—*Fixation of Nitrogen by Alumina and Carbon;* [Read to Amer. Electrochemi. Soc.].—Met. & Cheml. Engg., Nov.,1912; p. 745; 1000 w; 35c. Also in Amer. Fertilizer, Nov.2,1912; p. 39; 2500 w; 25c.

Verner, E. P.—*Organic Ammoniates and Availability.*—Amer. Fertilizer, July27, 1912; p. 89; 2100 w; 65c.

W. Montgomery & Co.—*Half-Yearly Report on Nitrate of Soda.*—Mng. Jnl., July6, 1912; p. 690; 1000 w; 35c.

Ch. P.—*L'importance du role du nitrate de soude au Chile et dans le monde;* [Importance of role of Chile nitrate to Chile and rest of world; value and consumption in recent years].—Phosphate, June17,1912; p. 499; July1, p. 544; July15, p. 581; 3000 w*; 65c.

———. *Combustion of Atmospheric Nitrogen in Coke-Oven Gas;* [F. Häusser process].—Engnrg., Sept.6,1912; p. 329; 2000 w*; 35c.

———. *Explotacion del Azufre;* [Methods of extracting and refining sulphur in Louisiana and Sicily].—Mex. Mng. Jnl., Aug.,1912; p. 58; 2500 w; 25c.

———. *Resultats des compagnies nitratières;* [Review of the Chilean nitrate companies].—Phosphate, Aug.19,1912; p. 685; 1000 w; 35c.

———. *Vorkommen von Kalisalpeter in Peru;* [Potassium nitrate deposit near Quilca, Peru].—Kali, June15,1912; p. 302; 300 w; 35c.

PAINTS AND PIGMENTS

See also Barytes.

Baly, E. C. C.—*Toxicity of Paints;* [White Lead].—Soc. of Cheml. Ind'y, Jnl.; June15,1912; p. 515; 3500 w; 65c.

Burgstaller, S.—*Ueber die Ursache der Färbung gewisser mit Kobaltlösung erzeugter Mineralfarben;* [Theory of pigmentation with cetrain of the cobalt colors].—Vienna, 1912; 21 pp; $2 (pamphlet).

Cushman, A. S.—*A Brief Summary of American Tests on Paints for Metallic Structures;* [Read to Internatnl. Asso. f. Testing Materials].—Engg. & Contractg., Aug.28,1912; p. 228; 3500 w; 20c. Also in Engg. Record, Sept. 7, p. 268; 600 w; 25c.

Fleury, P.—*The Preparation and Uses of White Zinc Paints.*—London, 1912; 278 pp.; $2 (book).

Heaton, N.—*Materials and Methods of Decorative Painting.*—Roy. Soc. of Arts, Jnl.; Aug.2,1912; p. 870; Aug. 9, p. 883; Aug. 16, p. 898; 9000 w*; 65c.

Labordère, P. and F. Anstett.—*Notes on the Testing of Anti-Corrosion Paints.*—Internatnl. Asso. f. Testg. Materials, Proc., Vol. II, No. 10; 1912; 13 pp; 95c.

Lemaire, —. *The Manufacture of Lithophone in Germany.*—Jnl. of Ind'l & Engg. Chem'y, Oct., p. 775; 1000 w*; 65c.

McCallie, S. W.—*The Ocher Deposits of Georgia.*—Mines & Minerals, Aug.,1912; p. 46; 1000 w*; 35c.

Phalen, W. C.—*Production of Mineral Paints in* 1911; [Ocher (chiefly Ga. and Penn.); umber and sienna (Penn.); metallic paints (chiefly Md., N. Y., Penn., Tenn., Wis.); mortar colors and ground shales and slate (chiefly Penn. and N. Y.); zinc and lead pigments].—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 25 pp.; 15c.

Rambousek, Dr.—*Hygiene in der deutschen Bleifarbenindustrie;* [Hygiene in the German lead pigment works].—Chemiker Ztg., Aug.1,1912; p. 882; 1600 w; 35c.

PHOSPHATE

See Fertilizers.

POTASH

Arrhenious, S. and R. Lachmann.—*Die physikalisch-chemischen Bedingungen bei der Bildung der Salzlagerstätten und ihre Anwendung auf geologische Probleme;* [The physical-chemical conditions during the formation of saline deposits, with special reference to geologic problems and the Zechstein deposits].—Geol. Rundschau, 1912, Vol. 3, pp. 139-157; 75c.

Beckurst, H.—*Wissenschaftlichen Forschungen über die Natrium- und Magnesiumsalze in den Gewässern des Elb- und Weserstromgebietes;* [Review of investigations of the salt and magnesia content of the waters of the Elb and Weser river basins, as influenced by the potash works].—Kali, July15,1912; p. 337-341; 45c.

Beil, C.—*Die Ausdehnung des oberrheinischen Kalivorkommens;* [Extension and limits of the Upper Rhine potash field near Mülhausen].—Glückauf, Nov.2, pp. 1804-1807*; 50c.

Berger, L.—*Neue angebliche Kalifunde;* [New potash possibilities; Borax Lake and Searles Lake deposits, California].—Techn. Blätter, Sept.14,1912; p. 289; 2100 w; 35c.

Bienhold, Dr.—*Wertzuwachssteuer und Kaliindustries;* [The German law of Feb.14, 1911, taxing unearned increment, and its effect on potash lands, and potash mining].—Deu. Bergwerks Ztg., Aug.31,1912; p. 1; 1500 w; 35c.

Binder, F., and others.—*Les mines de potasse dans la Haute-Alsace;* [Potash industry of Upper Alsace; monograph on history, geology, boring, extraction, marketing, etc.].—Soc. Ind'l. de Mulhouse, Bull., Vol. 82, No. 4; 1912; pp. 207-300. Abstract in Phosphate, Aug.19,1912; p. 687; Sept.2, p. 735; 600 w; 35c.

Blanck, E.—*Die Bedeutung des Phonoliths als Kalidüngemittel;* [Value of phonolite as fertilizer].—Zentralbl. f. Kunstdünger Ind., Aug.7,1912; p. 253; 1400 w; 35c.

Cowles, A. H.—*Alumina, Hydrochloric Acid, Alkalis, and White Hydraulic Cement from Clay, Salt and Lime.*—See Aluminum.

Cushman, A. S., and G. W. Coggeshall.—*The Production of Available Potash from the Natural Silicates.*—8th Internatnl. Congr. of Appl. Chem'y, Vol. 5, 1912; pp. 33-49. Abstract in Met. & Chemi. Engg., Nov., p. 727; 4400 w; 35c. Also in Engg. Record, Sept.14,1912; p. 306; 1100 w; 20c.

Dietz, Dr. — *Ueber die Bekämpfung höherer Temperaturen im Kalibergbau;* [The treatment of higher temperatures in German potash mines].—Kali, Oct.15, p. 501-512; 45c.

Ehrhardt, R.—*Die Kali Industrie;* [The potash industry].—Leipzig, 1912; $1.50 (book).

Firman, W. S.—*Gewinnung von Kalisalzen aus Seetang;* [Recovery of potash from sea-weed; abstract of U. S. Pat. No. 1,010,403].—Kali, June1,1912; p. 280; 500 w*; 45c.

Gale, Hoyt S.—*Occurrence of Nitrate Deposits in Nevada* (Bulletin 523 U. S. Geological Survey; abstract).—Mg. & Eng. World, Dec.7,1912; p. 1048; 4000 w*; 10c.

Gale, H. S.—*Field Investigations for Potash in America;* [Read to Natnl. Fertilizer Asso.].—Amer. Fertilizer, July27, 1912; p. 38; 2700 w; 65c.

Gale, H. S.—*Simple Field and Laboratory Tests for Potash;* [From U. S. Geol. Survey Bull. 530-A; 1911].—Mng. Sci., Aug.1, 1912; p. 70; 1200 w; 20c.

Hart, Edw.—*Potash, Silica and Alumina from Feldspar;* [Read to Internatnl. Congr. of Appl. Chem'y; abstract].—Met. & Chemi. Engg., Sept.12,1912; p. 634; 300 w; 35c.

Hoff, J. H., van t'.—*Untersuchungen über die Bildungsverhältnisse der ozeanischen Salzablagerungen, insbesondere des Stassfurter Salzlagers;* [Researches on the genetic relations of oceanic salt deposits, with special reference to the Stassfurt salines].—Leipzig, 1912; 374 pp*; $5.50 (book).

Hoffman, M.—*Verbrauch an reinem Kali in den Jahren* 1890, 1900 *und* 1910; [Statistics of potash consumption in 1890-1900-1910].—Deu. Landwirtschafts Ges., Arbeiten, Heft 216; 1912; $1.

Howard, L. O.—*Alumina and Alunite;* [Possibilites of Utah alunite toward aluminum production].—Salt Lake Mng. Rev., Nov.15, p. 17; 1800 w*; 25c.

Krische, P.—*Die Gewinnung von Kalisalzen durch Vegetabilien;* [The recovery of potash from sea weeds and vegetable remains].—Kali, Sept.1,1912; p. 416; 2500 w; 45c.

Krische, P.—*Eine Zusammenstellung der neueren massgebenden Untersuchungen über die Wirkung der deutschen Kalisalze;* [Review and summary of the more important researches of recent years on the fertilizer action and value of German potash salts].—Kali, June15,1912; p. 289-293; 45c.

Marin, A.—*Las minas de calafatita de Benahadux;* [The calafatite (alunite) mines of Benahadux, Almeria; geology].—Inst. Geol. Espana, Bol., Vol. 32, 1911; 1912; pp. —.

Meisner, —. *Der oberelsässische Kalibergbau;* [The potash deposits and mining industry in Upper Alsace].—Glückauf, Aug. 17,1912; pp. 1321-1324*; 50c.

Meuskens, Clemens.—*Entwickelung und Stand der heutigen Stein- und Kalisalzaufbereitung, III;* [Development and status of modern stone and potash-salt preparation].—Kali, Nov.1,1912; p. 540; 4500 w*; 35c.

Meuskens, Cl.—*Die maschinelle Abbauförderung und ihre Wirtschaftlichkeit im Kalibergbau;* [Mechanical face conveyors in potash mines, especially with compressed-air drive; their practical applications and economy].—Techn. Blätter, June 8,1912; pp. 177-185*; 8000 w*; 35c.

Meuskens, Cl.—*Entwickelung und Stand der heutigen Stein- und Kalisalzaufbereitung;* [Evolution and present status of the dressing and preparation of rock salt and potash salts].—Kali, Oct.1, pp. 481-488*; Oct.15, pp. —*; 75c.

Meyer, H. L. F.—*Entstehung der deutschen Kalisalzlager;* [Genesis of the German potash salt deposits; abstract from Oberhess. Ges. f. Natur- & Heilk., Giessen; Ber. f. 1910-11].—Kali, July15,1912; p. 356; 300 w; 45c.

Milch. — *Deutschlands Bodenschätze;* [Mineral wealth of Germany; coal and salt deposits].—Leipzig, 1912; 151 pp; 41 figs; $1 (book).

Mitchell, G. E.—*Alunite, a New Source of Potash.*—Cassier's Mag., July,1912; p. 17; 1500 w*; 35c.

Riedel, O. — *Chemisch-mineralogisches Profil des älteren Salzgebirges im Berlepschbergwerk bei Stassfurt;* [Succession and genesis of the salines in the Berlepsch potash-salt mine, Stassfurt].—Zts. f. Krystallogr., Jan.,1912; pp. 139-173*; 75c.

Przibylla, C.—*Eine Methode zur Bestimmung des Kalis durch Massanalyse;* [Quantitative estimation of potash].—Kali, Oct.1, p. 473; 2500 w; 45c.

Reimer, C. L.—*Ueber Issleibs Verfahren zur Beseitigung der Endlaugen;* [Issleib's process for getting rid of potash waste solutions by turning them into the soil].—Kali, Sept.15,1912; p. 445; 2000 w; 35c.

Rohland, Dr.—*Die Verwertung der Magnesiumsalze aus den Endlaugen der Kaliwerke;* [Utilization of the magnesium salts of the waste liquors of potash works].—Chemiker Ztg., Oct.8, p. 1169; 1000 w; 35c.

Ross, Wm. H.—*The Extraction of Potash from Silicate Rocks.*—U. S. Bur. of Soils, Circular 71; 1912; 10 pp.; 15c.
Abstract in Amer. Fertilizer, Aug.24, 1912; p. 44; 3700 w; 25c.

Scheffer, —. *Die Deutsche Kaliausfuhr seit* 1900; [Statistics of German potash exports since 1900].—Techn. Blätter, June8, 1912; 187-189; 3000 w; tables; 35c.

Schmitz B.—*Eine neue Methode zur titrimetrischen Kalibestimmung in Düngemitteln;* [New titration method for estimating potash in fertilizers].—Zentralbl. f. Kunstdünger Ind., Oct.7, p. 337; 1800 w; 35c.

Stange, Alb. (Editor).—*Jahrbuch des Kalisalzbergbaues;* [Yearbook of Potash Mining].—Berlin, 1912; 668 pp*; $1.50.

Strauss, Dr.—*Die Elektrizität im Kalibergbau;* [Applications of electricity in potash mining].—Techn. Blätter, June8, 1912; p. 185; June15, p. —; 2000 w; 50c.

Stutzer, A.—*Können Kalisalze im Gemenge mit Kochsalz bei der Ernährung von Menschen und Tieren Verwendung finden;* [Is it possible to use potash salts with table salt in the alimentation of man and animals?].—Kali, Aug.1,1912; p. 365; 750 w; 45c.

Stutzer, A.—*Amerikanisches Kalisalz;* [The search for potash in the U. S.].—Kali, June16,1912; p. 294; 600 w; 45c.

Surr, G.—*Search for Potash in Western United States;* [Reviews general conditions].—Mining & Engg. World, July20, 1912; p. 103; 1600 w; 10c.

Surr, G.—*A Simple and Apparently Reliable Test for Potash.*—Mining & Engg. World, Aug.17,1912; p. 288; 1500 w; 10c.

Trnka, R.—*Zur Bestimmung des Kaliums als Kaliumplatinchlorid;* [Determination of potassium as potassium-platinum chloride].—Zts. f. analyt. Chemie, 1912, No. 2, p. 103; 200 w; 65c.

Turrentine, J. W.—*The Salines of the U. S. as a Source of Potash.*—8th Internatnl. Congr. of Appl. Chem'y, Vol. 15, 1912; pp. 319-332. Abstract in Met. & Cheml. Engg., Nov., p. 733; 500 w; 35c.

Waggaman, W. H.—*Alunite as a Source of Potash.*—8th Internatnl. Congr. of Appl. Chem'y, Vol. 15; 1912; pp. 375-379. Abstract in Amer. Fertilizer, Aug. 10, p. 54; 1200 w*; 25c. Also in Met. & Cheml. Engg., Nov., p. 734; 500 w; 35c.

Wagner, B. and E. Ewers.—*Allgemeines über die Versalzung der Flussläufe durch Abwässer aus Kalifabriken und Kalischächten;* [General notes on the salinification of streams by the waste waters of potash mines and works; read to Verbd. öffentl. Chemiker Deutschl.].—Chemiker Ztg., Oct.29, p. 1262; 1800 w; 35c.

Wilke-Dörfurt, E.—*Ueber ein spektralanalytisches Verfahren zur Bestimmung kleiner Mengen Rubidium heben viel Kalium;* [Spectrometric estimation of small amounts of rubidium accompanying abundant potassium].—Zts. f. anorgan. Chemie, Vol. 75, No. 2, 1912; pp. 132-140*; $1.20.

Wilke, E. —*Ueber das Vorkommen von Rubidium in dem Kalisalzlagerstätten;* [Presence of rubidium in the potash salines of Germany].—Kali, June1,1912; p. 245; 6500 w; 45c.

Wolff, G. — *Therapeutische Kalisalze;* [The therapeutic salts of potash].—Deu. Bergwerks Ztg., June9,1912; p. 1; 4000 w; 35c.

Dr. H.—*Zur Lage und Rentabilität der Kali-Industrie;* [Present condition and profitableness of the potash industry].—Deu. Bergwerks Ztg., June8,1912; p. 1; 1000 w; 35c.

K. K. Finanzministerium. — *Statistische Mitteilungen über das oesterreichische Salzmonopol;* [Statistics of the imperial salt monopoly in Austria; 1910].—Montanist. Rundschau, Aug.16,1912; p. 800; 500 w; tables; 45c.

———. *Bericht über den rheinischwestfälischen Kuxenmarkt für* 1911, *und statistische Mitteilungen über die wichtigsten Kohlen- und Kaligewerkschaften;* [Review of the Rhine-Westphalian share market in 1911, and statistics of the leading coal and potash companies].—Düsseldorf, 1912; 16 pp.; 80c; (pamphlet).

———. *Bessere Aussichten am Markt der Kaliwerte?* [Improvement in the German potash industry; market and share review].—Deu. Bergwerks Ztg., Aug.27, 1912; p. 1; 1000 w; table; 35c.

———. *Bohrungen auf Kali in Frankreich;* [Potash discoveries near Belfort, Upper Alsace].—Deu. Bergwerks Ztg., Sept.18, 1912; p. 1; 800 w; 35c.

———. *Die endgültigen Beteiligungziffern am Kaliabsatz;* [Final allotment figures of the German Potash Syndicate].—Deu. Bergwerks Ztg., July19,1912; p. 1; 1000 w; 35c. Also in Kali, Erz & Kohle, July15, p. 703; table; 35c.

———. *Die Erschliessung von Kalisalzen in Baden;* [The discovery of potash deposits in Baden].—Organ d. Bohrtechniker, July1, 1912; p. 148; 1200 w; 35c.

———. *Deutschlands Kaligewinnung;* [The extraction of potash salts in Germany; from "Technische Rundschau"].—Organ d. Bohrtechniker, June15,1912; p. 134; 1800 w; 35c.

———. *Deutschlands Salzwirtschaft,* 1909 *und* 1910; [Statistics of Germany's salt industry in 1909 and 1910].—Bergwirts. Mittlngn., Aug.,1912; p. 146; 2000 w; tables; 75c.

———. *Exportations des sels de Stassfurt;* [Statistics of consumption and exports, by countries, of Stassfurt kainite and sylvanite 1909, 1910, 1911].—Phosphate, July22,1912; p. 599; 250 w; tables; 35c.

———. *Kein Kali ohne Kalk;* [Necessity of using lime with potash fertilizers; mineralogy and chemistry of potash fertilizer action].—Ton-Industrie Ztg., July6, 1912; p. 1084; 800 w; 35c.

———. *Les Kelps Américains;* [Potash from seaweeds in the U. S.].—Phosphate, Sept.16,1912; p. 777; 1000 w; 35c.

———. *Potash in Nebraska.*—Am. Fertilizer, Nov.30,1912; p. 54; 750 w; 35c.

———. *Schriften des Verbandes zur Klärung der Wünschelrutenfrage; (2) Versuche im Kalibergwerk Riedel;* [Researches with the divining rod; (2) Detection of sylvanite and rock changes in the Riedel potash mine, Hannover].—Stuttgart, 1912; pp. —; $1 (book).

———. *The German Potash Industry;* [The syndicate, the potash law, and results].—Amer. Fertilizer, July13,1912; p. 36; 1500 w; 25c.

———. *Von der II. Kali-Hauptversammlung,—VI. Deutscher Kali-Tag;* [2d German potash convention, Berlin, June,1912; abstracts of papers read and proceedings]. —Deu. Bergwerks Ztg., June14,1912; p. 1; June15, p. 1; June18, p. 1; June22, p. 1-2; 20,000 w; 75c. Also in Chemiker Ztg., June 27, pp. 726-728; 3500 w; 35c.

———. *Vorkommen von Kalisalpeter in Peru;* [Potassium nitrate deposit near Quilca, Peru].—Kali, June15,1912; p. 302; 300 w; 35c.

———. *Wohlfahrteinrichtungen und Arbeitwerhältnisse in der Kaliindustrie;* [Welfare work and labor conditions in the German potash industry].—Deu. Bergwerks Ztg., Aug.1,1912; p. 1; 2000 w; 35c.

PYRITE AND SULPHUR

Allen, W. S., and H. B. Bishop.—*An Exact Method for the Determination of Sulphur in Pyrites Ores.*—8th Internatnl. Congr. of Appl. Chem'y, 1912; Vol. 1, pp. 33-51.

Conder, H.—*The Mt. Lyell Co.'s Property* [Ore bodies]. — Australian Mng. Standd., Aug.1,1912; p. 107; Aug.8, p. 131; 3000 w*; 50c.

Dayton, S. P.—*Rio Tinto Pyrites;* [Recovery of copper from cinders].—E. & M. J., Aug.17,1912; p. 293; 300 w; 25c.

Dreibrodt, O.—*Neuer Apparat zur Trennung der Mineralien von Salzgesteinen mit schweren Flüssigkeiten;* [Separation of saline minerals by flotation in heavy liquids; chiefly in chemical analysis].—Kali, July1,1912; p. 314; 1000 w*; 35c.

Goüin, —. *Les mines de pyrite de la région de Huelva;* [The pyrite mines and industry of the Huelva region, Spain; with notes on the pyrite of the world's other districts].—Soc. de l'Ind. Minérale St. Etienne, Bull., Oct.,1912; pp. 341-386*; Nov., pp. —; $2.

de Hautpick, E.—*Copper Mines of the Urals.*—Mng. Jnl., July6,1912; p. 672; 1800 w; 35c.

Heczko, A.—*Zur Schwefelbestimmung in Pyriten;* [Estimation of sulphur in pyrite]. —Zts. f. analyt. Chemie, 1912, No. 1; pp. 1-13; 65c.

Hess, F. L.—*A Sulphur Deposit in the San Rafael Canyon, Utah.*—U. S. Geol. Survey, Bull. 530-O; 1912; pp. 3-6; 1000 w; 10c.

Hewett, D. F.—*Sulphur Deposits of Sunlight Basin, Wyoming.*—U. S. Geol. Survey, Bull. 530-O; 1912; pp. 6-19*; 10c.

Jaeger, F. M., and J. B. Menke.—*Ueber die binären Systeme aus Tellur und Schwefel, und aus Tellur und Jod;* [The binary combinations of tellurium with sulphur and tellurium with iodine].—Zts. f. anorgan. Chemie, 1912, No. 3; pp. 241-260*; $1.15.

Koch, A.—*The Sulphur Trade in America.* —M. & S. P., June 29, 1912; p. 890; 1100 w; 20c.

Kothuy, —. *Recherches sur la marche du procédé de grillage chlorurant des cendres de pyrite;* [Succession of the reactions in chloride roasting of pyritic cinders; from Metallurgie, 1911, No. 13, pp. 389-399; French abstract].—Rev. de Métal'gie, June,1912; p. 311; 1200 w*; $1.15.

Kruyt, H. R.—*Einige physikalische Konstanten des Schwefels und deren Zusammenhang;* [Some physical constants of sulphur and their relations].—Zts. f. Elektrochemie, July15,1912; p. 581; 1500 w*; 45c.

Larsen, E. S., and J. F. Hunter.—*Two Sulphur Deposits in Mineral County, Colorado.*—U. S. Geol. Survey, Bull. 530-O; 1912; pp. 19-25; 10c.

Abstract in Mng. Sci., June20,1912; p. 528; 700 w; 20c.

Lindemann, E.—*Magnetometric Survey of a Nickeliferous Pyrrhotite Deposit in the Sudbury District.*—Canada Dept. Mines, Mines Branch, Rep. f. 1911; 1912; p. 103-104; 800 w; $1.

Müller, C.—*Die Erzlagerstätten von Traversella im Piemont, Italien;* [Geology of the magnetite and pyrite mines and ore bodies at Traversella, Piedmont, Italy].— Zts. f. prakt. Geol., June,1912; pp. 209-240*; 75c.

Münichsdorfer, F.—*Die Gas- und Schwefelbrunnen im bayerischen Unterinngebiet;* [Gas and sulphur springs of lower Bavaria]. —Geogn. Jahresh., 1911, pp. 233-257*; 75c.

Phillips, W. B.—*Sulphur Deposits in Culberson County, Texas.*—Amer. Fertilizer, June15,1912; p. 44-g; 1200 w*; 25c.

Pucci, F. S.—*Degli incendi nelle miniere di solfo;* [Fires in the sulphur mines of Sicily; methods of prevention, control and utilization].—Caltanissetta, 1912; 122 pp; $1 (book).

Redlich, K. A.—*Ein Beitrag zur Genesis der alpinen Kieslagerstätten;* [Genesis of the pyrite deposits of the Austrian Alps].— Zts. f. prakt. Geologie, May,1912; p. 197; 2800 w*; 75c.

Saunders, —. *Metallurgy at Mt. Morgan, Queensland.*—See Copper.

Schuyten, C.—*Sur la vitesse d'hygroscopicité des chlorures alcalins;* [The speed of hygroscopicity of alkaline chlorides].—Soc. Chemiq. Belgiq., Bull.; May,1912; p. 262-265; 1000 w; 50c.

Sheldon, G. L.—*Railroad Valley, Nev., Potash Fields.*—M. & S. P., Oct.19, p. 502; 1800 w; 20c.

Simmersbach, O.—*Verhüttung schwefelhaltiger Kiesabbrände im Hochofen;* [Smelting of pyrite cinders in the blast furnace]. —Stahl & Eisen, Aug.1,1912; pp. 1254-1259*; Aug.15, pp. 1370-1375*; 95c.

Smoot, A. M.—*Sulphur Determination in Pyrites;* [New electrochemical method].—E. & M. J., Aug.31,1912; p. 412; 400 w; 25c.

Spurr, G. E., G. H. Garrey and C. N. Fenner.—*Study of a Contact Metamorphic Ore Deposit; Dolores Mine, Matehuala, S. L. P., Mex.;* [Cupriferous pyrite].—Econ. Geol'y, Aug.,1912; p. 444-484*; 65c.

Tabary, E.—*Le marché du soufre;* [Review of the sulphur market and trade].— Echo d. Mines, Oct.21, p. 1098; 1300 w; 35c.

Treadwell, W. D.—*Ueber die elektroanalytische Bestimmung des Kupfers in pyriten;* [Electroanalytic estimation of copper in pyrites].—Chemiker Ztg., Aug.24, 1912; p. 961; 800 w; 35c.

Turner, H. W.—*Copper Mines of the Ural Region;* [Describes pyrite ores and ore-bodies].—Mng. Mag., June,1912; pp. 442-451*; 45c.

Vail, R. H.—*New Sulphur Operation in the South;* [Frasch process on "dome" near mouth of Brazos river, Texas].—E. & M. J., Sept.7,1912; p. 449; 5500 w*; 25c.

Vinnassa de Regny, P.—*Lybia Italica.*— See under Iron and Steel.

Wilson, A. W. G.—*Copper and Pyrites;* [Review of Canadian developments in 1911].

—Canada Dept. Mines, Mines Branch, Rep. f. 1911; 1912; p. 90-94; 2400 w; $1.

Youchékvitch, N.—*La théorie de la fusion des minerais de cuivre;* [Copper and pyrite ores in roasting and smelting furnaces at temperatures below melting].—See under Copper.

Ch. P.—*La production et consommation du soufre;* [Production and consumption of sulphur].—Phosphate, Sept.9,1912; p. 755; 1000 w; 35c.

———. *Ankylostomasie dans les soufrières de Sicile;* [Ankylostomiasis in the Sicilian sulphur mines].—Annales d. Mines (Belgiq.); Vol. 17, No. 4, 1912; p. 969; 500 w; 65c.

———. *Atmospheric Nitrogen by the Aid of Coke Oven Gases;* [Häusser process].—Compr. Air Mag., Aug.,1912; p. 6517; 2500 w*; 25c.

———. *Ausbeutung der Schwefellager auf Neuseeland;* [Sulphur deposits of New Zealand].—Zentralbl. f. Kunstdünger-Ind., Aug.7,1912; p. 256; 300 w; 35c.

———. *Esportazione di marmo ed alabastro e solfo,* 1910, 1911; [Italian exports of marble, alabaster, and sulphur in 1910 and 1911].—Rassegna Mineraria, July21, 1912; p. 40; tables; 35c.

———. *Gypsum Mines of England;* [Mining practice].—E. & M. J., Aug.17,1912; p. 319; 2000 w; 25c.

———. *La industria del azufre en Sicilia;* [Sulphur industry in Sicily].—Rev. Minera, July16,1912; p. 338; 1500 w; 35c.

———. *Les Pyrites;* [Pyrites, world's sources of supply, preparation, etc.].—Soc. Amicale Ecole Douai, Bull., July10,1912; p. 472; 3000 w; 35c.

———. *Les pyrites et la province de Huelva;* [Pyrites of Huelva, Spain].—Phosphate, Sept.30, p. 827; 800 w; 35c.

———. *Mine and Mill Production, Germany,* 1909 *and* 1910.—See under Lead.

———. *Mines and Mining in Japan.*—Japan Yearbook, 1912; pp. 318-332.

———. *The Thiogen Process of Fume Control.*—Met. & Cheml. Engg., Nov.,1912; p. 710; 700 w; 35c.

QUARTZ; FELDSPAR; SILICATES

Blackie, A.—*On the Behavior of Fused Silica at High Temperatures.*—Faraday Soc., Trans., Vol. 7, Pts. 1-2; 1911; pp. 158-165*; $4.

Borchers. — *Metallurgic Progress at Aachen,* 1902-1912; [in German].—See Aluminum.

Cushman, A. S. and G. W. Coggeshall.—*The Production of Available Potash from the Natural Silicates.* — 8th Internatnl. Congr. of Appl. Chem'y, Vol. 5, 1912; pp. 33-49. Abstract in Met. & Cheml. Engg., Nov., p. 727; 4400 w; 35c.

Endell, K.—*Ueber die Umwandlungen der Kieselsäure bei höheren Temperaturen;* [Transformations of silica and cristobalite at higher temperatures; read to Deu. Naturforscher, Münster, 1912].—Chemiker Ztg., Sept.24,1912; p. 1109; 500 w; 35c.

Grünwald, J.—*Chemische Technologie der Email-Rohmaterialen;* [Chemical technology of the crude materials in the enamel industries].—Dresden, 1912; 222 pp.; $2; (book).

Hart, Edw.—*Potash, Silica and Alumina from Feldspar;* [Read to Internatnl. Congr. of Appl. Chem'y; abstract].—Met. & Cheml. Engg., Sept.12,1912; p. 634; 300 w; 35c.

Lankester, Sir Ray.—*The Breaking of Flints.*—Stone Trades Jnl., July,1912; p. 26; 3000 w; 35c.

Manhard, W. E.—*Canada Pebbles;* [Port Arthur, Ont., on Lake Superior].—Rock Products, Sept.,1912; p. 49; 500 w*; 30c.

Middleton, J.—*The Production of Feldspar and Quartz in* 1911; [Feldspar in chiefly Conn., Me., Md., N. Y. and Penn.; also Cal., Minn., N. Car., Va.; quartz chiefly in Tenn., Ariz., Md., also Conn., Mass., N. Y., Penn., Mich., Wis.]—U. S. Geol. Survey, Mineral Resources of U. S. for 1911; 1912; 10 pp.; 20c.

Mulert, O.—*Ueber die Thermochemie der Kieselsäure und der Silikate;* [Thermochemistry of silica and the silicates].—Zts. f. anorgan. Chemie, 1912, No. 2; pp. 198-240*; $1.15.

Pogue, J. E. and V. Goldschmidt.—*On Quartz from Alexander County, N. Car.;* [Complex crystals].—Amer. Jnl. of Sci., Nov.,1912; pp. 414-420*; 65c.

Pohl, A.—*Ueber der heutigen Quartzglasverwendung in der Industrie;* [Present status of quartz-glass applications in the industries; read to Ver. Deu. Chemiker, Freiberg, May-June, 1912; abstract].—Chemiker Ztg., June11,1912; p. 656; 500 w; 35c.

Rollandet, G. J.—*The Smelting of Silicon;* [Tone electrofurnace process].—Mng. Sci., Aug.15,1912; p. 105; 750 w*; 20c.

Schmid, H. S. de.—*Phosphate and Feldspar Deposits of Quebec and Ontario.*—Canada Dept. Mines, Mines Branch, Rep. f. 1911; 1912; pp. 117-122; $1.

Schnatterbeck, C. C.—*Flint Pebbles for Tube Mills.*—Mng. Sci., Aug.22,1912; p. 121; 700 w; 20c.

Tertre, Le Gall du.—*Sur les briques en silice;* [Notes on silica brick].—Rev. d. Matériaux, Oct.,1912; p. 109-B; 1000 w; 45c.

Zsigmondy, R.; W. Bachmann and E. F. Stevenson.—*Ueber einen Apparat zur Bestimmung der Dampferspannungsisothermen des Gels der Kieselsäure;* [Apparatus for determining the vapor tension isotherms of silicic acid gel].—Zts. f. anorgan. Chemie, 1912, No. 2; pp. 189-197*; $1.15.

von Wartenberg, H.—*Ueber die Reduktion des Quarzes durch Wasserstoff;* [The reduction of quartz by hydrogen].—Zts. f. Elektrochemie, Aug.1,1912; p. 658; 1600 w; 45c.

———. *Sopra i quarzi trasparenti del Madagascar;* [Transparent quartzes of Madagascar]. — Rassegna Mineraria, Sept.21, 1912; p. 162; 1000 w; 35c.

———. *Standard Specification for Refractory Material;* [Silica and siliceous brick blocks, and tiles; report of committee of Inst. of Gas Engrs. of Gt. Britain].—Canadian Engr., Aug.15,1912; p. 331; 1400 w; 25c.

Potash from Feldspathic Rocks

See under Potash.

SALINES AND ALKALIS

Aigner, A.—*Die Salzberge von Hallein und Berchtesgaden;* [The rock salt deposits of Hallein and Berchtesgaden, Austrian Alps].—Montanist. Rundschau, July16,1912; p. 697; Aug.1, p. 748; 3500 w*; 70c.

Andrée, K.—*Ueber ein blaues Steinsalz;* [On some Blue-Colored Rock Salt from the Leopoldshall shaft No. 3 near Stassfurt].—Kali, Oct.15, p. 497-501*; 45c.

Arrhenius, S. and R. Lachmann.—*Die physikalisch-chemischen Bedingungen bei der Bildung der Salzlagerstätten und ihre Anwendung auf geologische Probleme;* [The physical-chemical conditions during the formation of saline deposits, with special reference to geologic problems and the Zechstein deposits].—Geol. Rundschau, 1912, Vol.3, pp. 139-157; 75c.

Arrhenius, S.—*Zur Physik der Salzlagerstätten;* [The physics of salt deposits].—Nobel Inst. Vetensk. Akad., Medd., Vol. 2, No. 20, 1912; 25 pp.

Arrhenius, S.—*Ueber die physikalische Bedingungen bei den Salzablagerungen zur Zeit ihrer Bildung und Entwickelung;* [Physical requirements for the genesis and development of saline deposits].—Kali, Aug.1,1912; p. 361; 2700 w; 45c.

Baldwin, A. H. (Director).—*Foreign Salt Market and Industry;* [Series of consular reports on the world's salt production, consumption and markets].—U. S. Special Consular Reports, No. 53; 1912; 82 pp.; 25c.

Bartonec, F.—*Schacht "Campi" in Bochnia;* [The "Campi" shaft in the Bochnia salt mine, Galicia, and the cave-in of 1912].—Oestr. Zts. f. Berg- & H-wesen, May4, 1912; p. 248; 1000 w*; 45c.

Böggild, O. B.—*Krystallform und Zwillungsbildungen des Kryoliths, des Perowskits, und des Boracites;* [Crystal form and twinning of cryolite, perowskite and boracite; from "Meddelelder om Grönland," Vol. 50].—Zts. f. Krystallogr., April, 1912; pp. 349-429*; 75c.

Bosshard, —, and Zwicky.—*Zur Konstitution der Perborate;* [The constitution of the perborates].—Zts. f. angew. Chemie, May17,1912; p. 993-995; 50c.

Bräuhäuser, M.—*Die Bodenschätze Württembergs;* [Review of the ore deposits, salines, and mineral resources of Württemberg].—Stuttgart, 1912; 331 pp; 37 figs; $2.50 (book).

Cole, L. H.—*The Gypsum and Salt Industries of Central and Western Canada.*—Canada Dept. Mines, Mines Branch, Rep. f. 1911; 1912; p. 108-116.

Cowles, A. H.—*Alumina, Hydrochloric Acid, Alkalis, and White Hydraulic Cement from Clay, Salt and Lime.*—See Aluminum.

Fastert, Carl.—*Ueber das Wachstum von Chlornatriumkristallen;* [The growth of sodium chloride crystals].—Kali, Sept.15,1912; p. 452; 2500 w; 35c.

Fresenius, H.—*Ueber die Auffindung des Jods im Wasser des Toten Meeres, etc.;* [Discovery of iodine in the water of the Dead Sea, and the determination of iodine in concentrated salt solutions rich in magnesia; read to Deu. Naturforscher, Münster, 1912; abstract].—Chemiker Ztg., Sept.24, 1912; p. 1097; 600 w; 35c.

Gale, H. S.—*The "Lila C" Borax Mine at Ryan, Cal.;* [From U. S. Geol. Survey report].—Mining & Engg. World, Aug.24,1912; p. 337; 1500 w; 10c.

Harrington, C. L.—*Mineral Resources of South America.*—See under Copper.

Haeberle, A. T.—*Southern Honduras.*—U. S. Consul. Rep., Aug.22,1912; p. 945; 2000 w; 20c.

Hoff, J. H. van t'.—*Untersuchungen über die Bildungsverhältnisse der ozeanischen Salsablagerungen, insbesondere des Stassfurter Salzlagers;* [Researches on the genetic relations of oceanic salt deposits, with special reference to the Stassfurt salines].—Leipzig, 1912; 374 pp*; $5.50 (book).

Howells, Joseph A.—*The Turks Island Salt Industry* (U. S. Consular report No. 52; abstract).—Mg. & Eng. World, Dec.7, 1912; p. 1050; 500 w; 10c.

Jaeger, F. M., and H. J. Fornbosch.—*Die Jodide der Elemente aus der Stickstoffgruppe;* [The iodides of the nitrogen group of elements].—Zts. f. anorgan. Chemie, 1912, No. 3; pp. 261-271*; $1.15.

Jaeger, F. M., and J. B. Menke.—*Ueber die binären Systeme aus Tellur und Schwefel, und aus Tellur und Jod;* [The binary combinations of tellurium with sulphur and of tellurium with iodine].—Zts. f. anorgan. Chemie, 1912, No. 3; pp. 241-260*; $1.15.

Jänecke, E.—*Eine graphische Darstellung der Gewichtsverhältnisse bei den ozeanischen Salzablagerungen;* [Graphic diagram of the specific gravity relations among the marine salts].—Kali, June1,1912; p. 255; 2000 w; 45c.

Jimenez.—*Estadistica minera en* 1909 *y* 1910, *Peru.*—See under Copper.

Koelichen, K.—*Zur Herstellung körniger Salze dienender Kühlapparat für heissgesättigte Lösungen;* [Production of crystalline salt by means of chilling warm saturated solutions; German Pats. No. 245,-649 and 246,297].—Kali, Oct.15, p. 521; 1200 w*; 45c.

Kreuznacher Solbäder A-G.—*Die Kreuznacher Solquellen und ihre Verwertung zur Gewinnung von Kochsalze, Mutterlauge und Radiumsalzen;* [The Kreuznach brine springs as a source of table salt, potash liquors and radium salts].—Kreuznach, 1912; 7 pp; 75c.

Korsuchin, I.—*Zur Lage der russischen Salzindustrie;* [The Russian salt industry].—Riga, Industrie Ztg., Sept.30, p. 276; 3000 w; 35c.

Lachmann, R.—*Studien über den Bau von Salzmassen; Physikalische Kräfte im Salz;* [Studies in salt structure; Crystallization and physical energy].—Kali, July15,1912; p. 342-353*; Aug.1, pp. 366-375; 75c.

Martell, P.—*Zur Geschichte des Salinenwesens in Westfalen;* [History of the salt industry in Westphalia].—Kali, June1, 1912; p. 270; June15, p. —; 8000 w*; 65c.

Meuskens, Cl.—*Entwickelung und Stand der heutigen Stein- und Kalisalzaufbereitung;* [Evolution and present status of the dressing and preparation of rock salt and potash salts].—Kali, Oct.1, pp. 481-488*; Oct.15, pp. —*; 75c.

Milch. — *Deutschlands Bodenschätze;* [Mineral wealth of Germany; coal and salt deposits].—Leipzig, 1912; 151 pp; 41 figs.; $1 (book).

Phalen, W. C.—*The Production of Salt and Bromine in* 1911; [N. Y., Mich., Ohio, Kans., La., Cal., W. Va., Tex., Utah, Hawaii, Idaho, Porto Rico, Nev., Okla., N. Mex., Penn., Va.].—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 20 pp.; 10c.

Race, Jos.—*The Production of Chlorine for Water and Sewage Sterilization.*—Canadian Engr., Aug.1,1912; p. 255; 2500 w*; 25c.

Riedel, O. — *Chemisch-mineralogisches Profil des älteren Salzgebirges im Berlepschbergwerk bei Stassfurt;* [Succession and genesis of the salines in the Berlepsch potash-salt mine, Stassfurt].—Zts. f. Krystallogr., Jan.,1912; pp. 139-173*; 75c.

Rinne, F.—*Natürliche Translationen an Steinsalzkrystallen;* [Natural translations in the system of rock salt crystallization from Thuringia].—Zts. f. Krystallogr., Feb., 1912; pp. 259-262*; 75c.

Ruppin, E.—*Die hydrographisch-chemischen Methoden;* [Sampling and analysis of ocean waters].—Zts. f. anorgan. Chemie, Vol. 75, No. 1, 1912; pp. 69-96*; $1.20.

Saxe, E. J.—*At a Salt Works Power Plant;* [Maximum salt extraction with minimum coal consumption].—Power, Aug.13, 1912; p. 219; 1000 w; 15c.

Schraml, C.—*Die Ausgestaltung der alpinen Salzberge;* [The Ebensee and Hallein rock salt and brine-pumping developments in the Alpine salt deposits; read to Allgm. Bergmannstag, Vienna, Sept., 1912; abstract].—Montanist. Rundschau, Sept.15, 1912; p. 961; 600 w; 50c.

Stille, H.—*Ueber Faltungsserscheinungen im hannoverschen Salzgebirge;* [Overthrust faults in the salt formations in the Hannover region].—Niedersächs. Geol. Ver., Ber. f. 1911; pp. 192-207*; $2.

Stille, H.—*Ueber Faltungserscheinungen burger Heide und die Verteilung der Salzvorkommen;* [Geology of the substructure of the Lüneburg district, Hannover, and classification of its salt deposits].—Niedersächs. Geol. Ver., Ber., 1911, pp. 225-286*; $2.

Stose, Geo. W.—*Geology of the Salt and Gypsum Deposits of Southwestern Virginia.*—U. S. Geol. Survey, Bull. 530-N; 1912; pp. 14-37*; 10c.

Stutzer, A.—*Können Kalizalze im Gemenge mit Kochsalz bei der Ernährung von Menschen und Tieren Verwendung finden;* [Is it possible to use potash salts with table salt in the alimentation of man and animals?].—Kali, Aug.1,1912; p. 365; 750 w; 45c.

Turrentine, J. W.—*Composition of Salines of the United States.*—Jnl. Ind. & Eng. Chem., p. 885; 2500 w; 75c.

Turrentine, J. W.—*The Salines of the U. S. as a Source of Potash.*—8th Internatnl. Congr. of Appl. Chem'y, Vol. 15, 1912; pp. 319-332. Abstract in Met. & Cheml. Engg., Nov., p. 733; 500 w; 35c.

Valeton, J. J. P.—*Ueber die Grundbegriffe der Phasenlehre und ihre Anwendung auf wasserhaltige Salze;* [Principles of the phase rule, and their bearing on hydrous salts; lecture before Leipzig Inst. f. Mineralogie & Petrog.].—Kali, June1,1912; p. 258; 3000 w; 45c.

Walker, W. H., R. E. Genenheimer; E. Wilderman, and others.—*Symposium on Electrolytic Production of Caustic and Bleach;* [Internatnl. Congr. of Appl. Chem'y; abstract].—Met. & Cheml. Engg., Sept.12,1912; p. 627; 2700 w*; 35c.

Weil, C. L.—*A Recent Evaporator Test;* [4-effect Faller system at Ludington Salt Works, Michigan].—Met. & Cheml. Engg., Sept.,1912; p. 565; 1000 w; 35c.

Woeikow, A.—*Der Salzgehalt der Meere und seine Ursachen;* [The salt content of the ocean and its causes].—Petermann's Mittlngn., 1912; pp. 5-8; 75-76*; $1.

Windakiewicz, —. *Stebnik;* [The Stebnik salt works, Austria; history, geology, operation, wages, etc.].—K. K. Geol. Reichs-Anst. Wein, Jahrb., Vol. 60; No. 1; 1912; pp. 1-78*; $2.

Yale, C. G., and H. S. Gale.—*Production of Borax in* 1911; [Includes description of Lila C. mine, Ryan, Cal., and map of deposits in Nevada and California].—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 12 pp.*; 15c.

Zelaya, Cesar.—*The Chilian Saltpetre and Its Origin.*—Mex. Mg. Jnl., Dec.,1912; p. 28; 1250 w; 25c.

K. K. Finanzministerium. — *Statistische Mitteilungen über das oesterreichische Salzmonopol;* [Statistics of the imperial salt monopoly in Austria; 1910].—Montanist. Rundschau, Aug.16,1912; p. 800; 500 w; tables; 45c.

———. *Bergwerke und Salinen im niederrheinisch- westfälischen Bergbaubezirk im J.* 1911; [Mines and salt works in the Lower Rhine-Westphalian mining district, 1911].—Essen, 1912; 90 pp; 75c (pamphlet).

———. *Deutschlands Salzwirtschaft* 1909 *und* 1910; [Statistics of Germany's salt industry in 1909 and 1910].—Bergwirts. Mittlngn., Aug.,1912; p. 146; 2000 w; tables; 75c.

———. *Die Salinen Oesterreichs;* [Salines and saline industry of Austria in 1910].—Oestr. Zts. f. Berg- & H-wesen, Oct.19, p. 597-599; Oct.26, pp. 611-614; 75c.

———. *Kristallisieren von Salzen in ununterbrochenem Arbeitsgang;* [Continuous crystallization of salts; Krupp apparatus, German Pat. No. 244,361 of May 3, 1911].—Kali, Oct.1, p. 491; 500 w*; 45c.

———. *L'industrie du sel en France;* [Salt industry of France].—Echo d. Mines, July18,1912; p. 836; 1000 w; 35c.

———. *Per uno studio sui residui della soda Leblanc;* [Need of the study of Leblanc soda residues].—Rassegna Mineraria, Aug.21,1912; p. 103; 800 w; 35c.

SAPPHIRES

See Gems.

TALC AND SOAPSTONE

Wittel and Welwart.—*Verwendung und Begutachtung von Talkum in der Papierfabrikation;* [Use of talcum in paper manufacture].—Montan. Ztg., June15,1912; p. 222; 1800 w; 35c.

Wolff, J. E.—*A New Chlorite from Northern Wyoming;* [Sheridanite, new talc-like mineral].—Amer. Jnl. of Sci., Nov.,1912; p.

———. *Die Talkindustrie;* [Notes on the talc industrie; from Jaulin's paper in Techniq. Moderne].—Kohle & Erz, Sept.23, 1912; p. 979; 600 w; 35c.

———. *Le marché du talc;* [Talc markets and production].—Echo d. Mines, July 11,1912; p. 829; 800 w; 35c.

———. *Steatite Deposits, Idar State.*—India Geol. Survey, Records; Vol. 42, Part 1; 1912.

PART II.—TECHNOLOGY.

MINES AND MINING (a*).

CHAPTER XII.

PROSPECTS AND PROSPECTING

Andros, S. O.—*Conservation of Water in Placer Prospecting;* [Describes special rocker for prospecting desert gravels].—E. & M. J., June29,1912; p. 1266; 1000 w*; 25c.

Barr, J. A.—*Tennessee Phosphate Practice;* [Prospecting, sampling, mining; read to Engg. Asso. of the South].—Mines & Minerals, Oct.,1912; p. 152; 4500 w; 35c.

Beyschlag, Fr.—*Was sind Geologie und Tiefbohrtechnik einander schuldig?* [What do geology and deep-drilling owe each other?; read to 26th convention Internatnl. Ver. d. Bohringr.].—Organ d. Bohrtechniker, Sept.15,1912; p. 206; 2100 w; 45c.

Bond, Jos.—*Peculiarities in the Drift;* [Some irregular pay shoots in southwestern copper veins].—E. & M. J., Oct.12, p. 679; 2500 w*; 25c.

Booth, M.—*Mining on Forest Reserves;* [Discusses regulations, and conditions in Colorado].—E. & M. J., June22,1912; p. 1215; 1600 w*; 25c.

Brown, C.—*Mineral Witches and Divining Rods in the Joplin District.*—Mining & Engg. World, July20,1912; p. 111; 800 w; 10c.

Connelly, W. A.—*Prospecting in Nicaragua;* [Northern gold fields].—M. & S. P., Sept.21,1912; p. 373; 1600 w*; 20c.

Craig, E. H. C.—*Oil Finding;* [Geology, genesis and prospecting of oil pools].—London, 1912; pp. —; $2.75 (book).
Reviewed in London Mng. Jnl., June 22, 1912; p. 617; 4500 w; 35c.

Dandois, —. *Recherches effectués dans la concession de Barbençon;* [Prospecting drill records at the Barbençon lead-zinc concessions, Belgium].—Annales d. Mines (Belgiq.), Vol. 17, No. 4; 1912; p. 1012-1020*; 65c.

Dick, J. E.—*Churn-Drill Examination of Placers;* [Drill and tools, setting up and operation; sampling; calculations, etc.].—Mines & Minerals, Sept.,1912; p. 92; Oct., p. —; 7500 w*; 65c.

Erb, Fr.—*Ueber die Ausbreitung Hertzscher Wellen an Metallen und Salzlösungen;* [Propagation of Hertzian waves against metals and salt solutions].—Braunschweig Techn. Hochschule Dissert., 1912; 33 pp; 25 figs; $1.50 (thesis).

Fauck, A.—*Die Nachweisung von Steinkohlen Vorkommen im Bohrlöchern;* [The determination of coal seams in drill holes].—Organ d. Bohrtechniker, June15,1912; p. 137; 600 w; 35c.

Gale, H. S.—*Simple Field and Laboratory Tests for Potash;* [From U. S. Geol. Survey Bull. 530-A; 1911].—Mng. Sci., Aug. 1,1912; p. 70; 1200 w; 20c.

Goebel, R.—*Zur Wünschelrutenfrage;* [The divining rod problem].—Erzbergbau, July1,1912; p. 219; 1600 w; 35c.

Grist, A. A. W.—*Nigeria, the Coming Tin Field; Hints to Miners and Prospectors;* [on regulations and ore occurrences].—Mng. World (London), Oct. p. 488; 1800 w; 35c.

Grossi, M.—*Ricerca delle acque sotterranee e dei giacimenti minerali;* [Prospecting for underground waters and ore deposits].—Rome, 1912; 378 pp; 68 figs; $2 (book).

Gunther, C. G.—*The Examination of Prospects.*—New York, 1912; 222 pp.*; $2 (book).

Hanlon, R. Y.—*A Light Prospecting Drill;* [3-in. New Zealand drill for depths not exceeding 50 ft.].—M. & S. P., July6, 1912; p. 17; 500 w; tables; 20c.

Henderson, R.—*Prospecting in the Yukon;* [Outfit required; from "Dawson Weekly News"].—M. & S. P., Sept.14,1912; p. 341; 1000 w; 20c.

Hess, F. L.—*Prospecting for Vanadium.*—M. & S. P., Sept.21,1912; p. 366; 2400 w; 20c.

Hoskins, A. J.—*Random Thoughts on Prospecting;* [Conditions in Colorado].—Mines & Minerals, Aug.,1912; p. 58; 1300 w; 35c.

Keating, John T.—*Prospecting for Tin in Nigeria.*—Mg. Mag., Nov.,1912; p. 363; 1000 w*; 45c.

King, O.—*The Past, Present and Future of Mineral Exploration in the Transvaal.*—S. Afr. Mng. Jnl., Anniversary No., Sept., 1912; p. 325; 3600 w*; $1.

von Klinckowstroem, C., and R. Weyrauch.—*Bibliographie der Wünschelrute seit* 1910, *und Nachträge,* 1610-1909; [Bibliography on the use of the divining rod, since 1910, with supplement, 1610-1909].—Stuttgart, 1912; 63 pp.; $1; (pamphlet).

Königsberger, J.—*Zur Erforschung des Erdinnern durch elektrische Wellen;* [Prospecting the interior of the earth by Hertzian waves; discusses Löwy's work].—Zts. f. prakt. Geol., May,1912; p. 207; 1000 w; 75c.

Lakes, H.—*Some Points to Be Considered in Mine Predictions;* [Prospectors' problems and application of geologic principles and ore genesis].—Mng. Sci., Nov.14, p. 308; 2800 w; 20c.

Lane, A. C.—*Diamond Drilling at Point Mamainse, Ontario;* [Prospecting by Calumet & Hecla Co. for copper].—Canada Dept. Mines, Mines Branch, Bull. 6; 1912; 59 pp.*; 50c.

Ledoux, A. R.—***Divining-Rod Experiences.***

*(a) Includes Prospects and Prospecting; Surveying and Drafting; Ore Reserves; Drilling and Boring; Explosives and Blasting; Sinking and Driving; Mine and Mill Waters; Pumps; Mine Gases; Ventilation; Supports: Props, Pillars and Stowing; Lighting and Signalling; Text Books.

—Mining & Engg. World, Aug.24,1912; p. 365; 300 w; 10c.

Löwy, H.—*Aufsuchen von Erzlagern durch drahtlose Telegraphie;* [Prospecting ore deposits by wireless telegraphy].—Erzbergbau, Oct.15, p. 324; 1000 w; 35c.

Löwy, —. *Die Fizeausche Methode zur Erforschung des Erdinnern;* [The Fizeau method of examining the earth's interior].—Oestr. Zts. f. Berg- & H-wesen, Sept.7, 1912; p. 501-503*; 45c.

Mager, H.—*Hydrologie Souterraine; les moyens de découvrir les eaux souterraines et de les utiliser;* [Methods of discovering and utilizing underground waters].—Paris, 1912; 776 pp; 311 maps; $6 (book).

Manning, Isaac A.—*Metals and Minerals of Colombia;* [Consular report; abstract].—Mg. Sci., Nov.28,1912; p. 343; 1500 w; 20c.

Maxwell, H.—*Exploring the Sudbury Ore Bodies.*—E. & M. J., Aug.3,1912; p. 206; 400 w; 25c.

Megraw, H. A.—*Hydraulic Surface Exploration;* [Washing off surface covering to expose bed rock at Cobalt, Ont.]—E. & M. J., Oct.5,1912; p. 635; 500 w*; 25c.

McDonald, P. B.—*Diamond Drilling in Exploration of Ore Deposits.*—Mex. Mng. Jnl., Oct.,1912; p. 29; 3000 w*; 25c.

Mentzel, Ch.—*Prospecting Headframe;* [and hoisting and dumping equipment].—E. & M. J., Oct.5,1912; p. 636; 1400 w*; 25c.

Morley, F. H.—*Outcrops of Precious Metal Veins.*—M. & S. P., Sept.21,1912; p. 368; 2200 w*; 20c.

Morris, H. C.—*Prospecting for Tungsten;* [Occurrences, chemical tests, and milling practice].—M. & S. P., June29,1912; p. 885; 1000 w; 20c.

Phalen, W. C.—*Prospecting for Chromium Ore.*—M. & S. P., Sept.28,1912; p. 400; 2300 w; 20c.

Redlich, K. A.—*Das Schürfen auf Erze von ostalpinem Charackter;* [Prospecting the East Alps types of sulphide and carbonate ores; read to Allgm. Bergmannstag, Vienna, Sept.,1912; abstract].—Montanist. Rundschau, Sept.15,1912; p. 954; 1100 w; 50c.

Rice, E. R.—*Determining Strike and Dip of Strata.*—E. & M. J., Oct.12, p. 685; 600 w*; 25c.

Rigaud, F.—*Alluvions métallifères;* [Geology, prospecting and development of placer deposits].—Rev. Univ. d. Mines, May, 1912; 53 pp.*; $1.15.

Ruhl, O.—*Prospect Drilling in the Joplin District, Mo.*—Mex. Mng. Jnl., Oct.,1912; p. 40; 2800 w; 25c.

Sheldon, G. L.—*As to Prospecting;* [Criticizes administration of mineral-land laws by U. S. Land Office and Forest Service].—E. & M. J., July6,1912; p. 5; 1000 w; 25c.

Voelkel, —. *Die absolute und relative Bauwürdigkeit;* [Absolute and relative value or profitability of prospects and mineral occurrences; review of Prussian and European mining law on discovery rights, with special reference to probable "valuable nature" of mineral discoveries].—Zts. f. Bergrecht, Vol. 53, No. 3; 1912; pp. 349-361; 75c.

Waters, C. H.—*Prospecting Drill Records;* [Drill records in dredging gravels to show values, gravel character, bed-rock contour, and water levels].—M. & S. P., June15,1912; p. 833; 500 w*; 20c.

Weed, W. H.—*Is Geology a Success as a Guide to Ore Deposits?* [Bisbee, Ariz., and inadequacy of geology in predicting irregular ore-bodies and ore reserves].—Mining & Engg. World, Aug.10,1912; p. 245; 2400 w; 10c. Reprinted in Mines and Methods, Aug., p. 559; 2400 w; 20c.

Weston, W.—*Tenderfoot Gold Discoveries;* [Colorado].—E. & M. J., July20,1912; p. 124; 500 w; 25c.

Wood, J. E.—*Method of Collecting Gold from Pannings.*—Mex. Mng. Jnl., Oct.,1912; p. 18; 300 w; 25c.

Woodbury, T. D.—*Free Use of Timber from Public Lands;* [Review of U. S. laws, amendments, and regulations applying to prospectors and mining men].—M. & S. P., June15,1912; p. 831; 2000 w; 20c.

———. *Northern Rhodesia Mining Law;* [Discusses prospecting rights of Chartered Co. vs. individuals in Zambesi].—Mng. Jnl., July27,1912; p. 741; 750 w; 35c.

———. *Prospecting for Bauxite or Aluminum Ore.*—M. & S. P., Sept.7,1912; p. 305; 2500 w*; 20c.

———. *Schriften des Verbandes zur Klärung der Wünschelrutenfrage;* (1) *Des Landrates von Uslar Arbeiten in SW. Afrika;* (2) *Versuche im Kalibergwerk Riedel;* [Researches with the divining rod; (1) Von Uslar's discoveries of underground water in German S. W. Afrika; (2) Detection of sylvanite and rock changes in the Riedel potash mine, Hannover].—Stuttgart, 1912; pp. —; $1 (book).

———. *Ueber das Aufsuchen von Erzlagern durch drahtlose Telegraphie;* [Impossibilities in the way of prospecting ore deposits by wireless telegraphy].—Erzbergbau, Oct.1, p. 310; 500 w; 35c.

SURVEYING AND DRAFTING

Austin, F. W.—*Grade-Reading Attachment for Transits and Levels.*—Engg. News, June20,1912; p. 1187; 250 w*; 25c.

Austin, F. W.—*Grade-Reading Attachment for Transits and Levels.*—E. & M. J., Sept.28,1912; p. 590; 250 w*; 25c.

Blessing, G. F., and L. A. Darling.—*Elements of Drawing.*—N. Y. and London; 1912; pp. xviii, 193; 151 figures; $1.75 (book).

Botsford, H. L.—*An Index System for Maps.*—E. & M. J., Oct.5,1912; p. 638; 300 w*; 25c.

Boyle, H.—*Topographical Surveys, Application and Uses.*—Pacific Mng. Jnl., Nov., p. 84; 1000 w*; 30c.

Davis, J. L.; E. A. May and A. W. Tidd.—*Methods of Alignment in Three Aqueduct Tunnels;* [Yonkers and Van Cortlandt pressure tunnels, N. Y., and Wachusetts tunnel, Mass.].—Engg. News, June 20,1912; p. 1183; 4000 w*; 25c.

Donaldson, R. J.—*Shaft Plumbing.*—Mng. & Engg. Rev., Oct., p. 15; 300 w*; 35c.

Donaldson, R. J.—*Spad for Underground Surveys.*—Mng. & Engg. Review, Oct., p. 15; 300 w*; 35c.

Fish, J. C. L.—*Technic of Surveying Instruments; a Field Instructor for the Beginner.*—Stanford Univ., Calif.; 32 pp.; 35c (pamphlet).

Forbes, C. R.—*Some Problems in Mine Surveying;* [Determination of a plane, direction and slope of 2 lines therein being known].—Mines & Minerals, Nov., p. 226; 500 w*; 35c.

Griggs, E. L.—*Road Surveys with the Plane Table.*—Engg. Record, July20,1912; p. 68; 1200 w; 25c.

Haight, C. M.—*Altering Blueprints.*—E & M. J., Oct.19, p. 737; 300 w; 25c.

Handley, J.—*Shaft Surveying and New Plummets;* [From Canadian Mng. Jnl.].—Mex. Mng. Jnl., Oct.,1912; p. 44; 2400 w; 25c.

Henderson, H. G.—*Notes on Mine Surveying;* [Identifying stations underground; correcting traverses so as to tie].—Mines & Minerals, Oct.,1912; p. 169; 1200 w*; 35c.

Henderson, H. G.—*Note on Bench Marks.*—Iron & Coal Trades Rev., June28, 1912; p. 1033; 350 w*; 35c.

Henderson, H. G.—*Setting Out Underground work;* [Chiefly on proper alignment of workings].—E. & M. J., Sept.7,1912; p. 442; 1200 w*; 25c.

Henderson, H. G.—*Survey Method of Locating a Shaft.*—E. & M. J., Nov.23,1912; p. 975; 500 w*; 25c.

Henderson, H. G.—*The Calculation of Areas.*—Mines & Minerals, Sept.,1912; p. 105; 2600 w*; 35c.

Henderson, H. G.—*Notes on Surveying Instruments;* [Overcoming instrument errors in angles and distance].—Iron & Coal Trades Rev., July5,1912; p. 8; 1500 w; 35c.

Heys, W.—*Control and Correction of Errors in Surveys Made with the Magnetic Needle.*—Sci. & Art of Mng., Aug.3, 1912; p. 624; 800 w; 35c.

Higgins, D. F.—*The Plane Table in Detailed Geologic Mapping.*—Econ. Geol'y, Aug.,1912; p. 502-506*; 65c.

Higginson, Jas.—*The Value of Mine Surveying.*—E. & M. J., Nov.23,1912; p. 971; 3000 w*; 25c.

Hirschl, A.—*Eine praktische Ausrüstung für die Winkelmessungen bei der geologischen Feldarbeit;* [Universal joint and alidade for measuring dip and angles].—Zts. f. prakt. Geol., July,1912; p. 287; 600 w*; 75c.

Hutchinson, F., and J. J. Staley.—*The Miner's Dial.*—Sci. & Art of Mng., Aug.17, 1912; p. 22; 1300 w*; 35c.

Keyes, Charles R.—*Trunk Channels as Ore Localizers.*—E. & M. J., Dec.7,1912; p. 1067; 1500 w; 25c.

Lacy, F. P.—*A Method of Log. Sine Correction.*—Informes y Memorias del Instituto de Minas Metalurgia, Vol. 3, No. 1, 1912-1913, p. 53; 1300 w*; 50 cts.

Lindemann, E.—*Magnetometric Survey of a Nickeliferous Pyrrhotite Deposit in the Sudbury District.*—Canada Dept. Mines, Mines Branch, Rep. f. 1911; 1912; p. 103-104; 800 w; $1.

Lloyd, H. F.—*Making and Plotting a Main Road Survey Accurately on a Working Plan.*—Sci. & Art of Mng., Oct.12, p. 117; 1200 w*; 35c.

Martin, A. H.—*Importance of Graphic Maps in Promotion.*—Mining & Engg. World, Oct.19, p. 708; 1200 w; 10c.

McCaw, S. E.—*Surveyor's Land Measure Conversion Tables;* [Links, chains and feet].—Engg. & Contractg., Sept.18,1912; p. 10; 500 w; tables; 20c.

McDougal, G. W.—*The Transit as an Improvised Tunnel Instrument.*—Engg. & Contractg., Sept.18,1912; p. 315; 200 w; 20c.

Milton, M. C.—*Illuminating the Cross Hairs in Mine Surveying.*—E. & M. J., Oct. 26, p. 775; 100 w; 25c.

Mintrop, L.—*Neue Flöz- und topographische Uebersichtskarten des rechtsrheinisch-westfälischen Steinkohlenbezirks;* [Newer map making methods and equipment on the coal-seam and topographic charts of the Right Rhine-Westphalian coal field].—Glückauf, Aug.10,1912; pp. 1285-1295*; 50c.

Mintrop, L.—*Einführung in die Markscheidekunde mit besonderer Berücksichtigung des Steinkohlenbergbaues;* [Introduction to Surveying, with Special Reference to Coal-Mine Surveying].—Berlin, 1912; 216 pp; 197 figs; $2.50 (book).

Nelson, A.—*Summary of Alterations Made by the British* 1911 *Mines Regulation Act Regarding Plans and Surveys.*—Sci. & Art. of Mng., Aug.31,1912; p. 48; 600 w; 35c.

Pallister, H. D.—*Illuminating the Cross Hairs in Mine Surveying.*—E. & M. J., Oct. 19, p. 728; 2500 w; 25c.

Reaburn, D. L.—*Short-Base Triangulation Methods on Reconnaissance and Exploratory Surveys.*—Engg. News, July25, 1912; p. 167; 1400 w*; 25c.

Rice, E. R.—*Determining Strike and Dip of Strata.*—E. & M. J., Oct.12, p. 685; 600 w*; 25c.

Rice, E. R.—*Construction of Triangulation Stations.*—M. & S. P., Nov.23,1912; p. 661; 1200 w*; 20c.

Riggs, T.—*Surveying the 141st Meridian;* [Alaska-Canada arctic boundary].—Natnl. Geogr. Mag., July, 1912; p. 685-713*; 35c.

Sutherland, C. C.—*Edmonton Benchmarks.*—Canadian Engr., Aug.29,1912; p. 371; 1000 w*; 25c.

Tonnesen, O.—*"Simplex" Stope Measuring Instrument.*—Cheml. Met. & Mng. Soc. of S. Afr., Jnl.; July,1912; p. 8; 1000 w*; 90c.

Wandhoff, —. *Ein Beitrag zur Magnetorientierung;* [Orientation of the magnetic needle, and effect of local variations in declination].—Markscheider Ver., Mittingn; 1912; No. 3; pp. 127-133*; $1.

Welles, F. G.—*Allowable Error in Closing Survey.*—Mines & Minerals, Sept.,1912; p. 88; 600 w; 35c.

White, E. E.—*Surveying and Sampling Diamond-Drill Holes;* [in Lake Superior copper country].—Amer. Inst. Mng. Engrs., Bull. 71; Nov.,1912; pp. 1277-1298*; $1.15.

E. G.—*Die beim Schachtbau verwendeten Apparate zur Messung von Bohrlochabweichungen;* [Determining the deviation from the vertical in shaft sinking].—Kohle & Erz, Sept.30, p. 994; Oct.7, p. 1026; 3000 w*; 50c.

———. *Surveying* [coal mining].—Sci. & Art of Mg., Nov.23,1912; p. 176; 2000 w; 25c.

———. *The Question of Tin Ore Reserves.*—S. A. Mg. Jnl., Nov.9,1912; p. 301; 3000 w; 35c.

———. *Useful Surveyor's Instrument;* [Rapid traverser].—E. & M. J., July13, 1912; p. 78; 1200 w*; 25c.

———. *Winter Surveying.*—Coal Age, Nov.2, p. 614; 800 w; 20c.

Mining Models

Milton, M. C.—*A Mine Model;* [of Copper Queen Cons. mine, Bishee, Ariz.].—M. & S. P., Sept.14,1912; p. 338; 750 w*; 20c.

ORE RESERVES: ESTIMATION, VALUATION

Denny, G. A.—*Ore Valuation;* [Rand methods and liability to over-valuation].—S. Afr. Mng. Jnl., Anniversary No., Sept., 1912; p. 45; 4000 w*; $1.

Dick, J. H.—*Churn-Drill Examination of Placers.*—See under Prospecting.

Eckel, E. C.—*Iron Ore Reserves;* [Holding and probable duration of principal companies in U. S. and Cuba].—Engg. Mag., Aug.,1912; pp. 665-674; 35c.

Goodchild, W. H.—*Valuation of Base-Metal Mines.*—Mng. Mag., July,1912; p. 50; 2100 w; 45c.

Griffith, Wm. and E. T. Conner.—*The Probable Life of the Anthracite Coal Field;* [Read to Internatnl. Congr. of Appl. Chem'y].—Black Diamond, Nov.2, p. 17, p. 31; 1000 w*; 30c.

Key, A. Cooper.—*Rand Ore Reserves;* [Dec., 1910, and Dec., 1911, by companies].—E. & M. J., July 20,1912; p. 128; 500 w; table; 25c.

Maxwell, H.—*Exploring the Sudbury Ore Bodies.*—E. & M. J., Aug.3,1912; p. 206; 400 w; 25c.

Vallentine, E. J.—*The Question of Ore Reserves;* [Reserves to maintain steadiness of output figures].—Malay Tin & Rubber Jnl., July8,1912; p. 11; 1000 w; 35c.

Webber, M.—*Ore Reserves and Life Extension.*—M. & S. P., Oct.19, p. 492; 5000 w*; 20c.

Weed, W. H.—*Is Geology a Success as a Guide to Ore Deposits?* [Bisbee, Ariz., and inadequacy of geology in predicting irregular ore-bodies and ore reserves].—Mining & Engg. World, Aug.10,1912; p. 245; 2400 w; 10c. Reprinted in Mines and Methods, Aug., p. 559; 2400 w; 20c.

———. *Improving Mine Reports.*—Mng. Mag., July,1912; p. 18; 1000 w; 35c.

———. *Notes on Mine Valuation.*—Ballarat School of Mines Mag., Vol. 15, No. 57; 1912; 5 pp.; 75c.

———. *Ore Reserve Grades and Recoveries;* [Analysis of mining and milling width by Rand companies].—S. Afr. Mng. Jnl., June15,1912; p. 579; 1400 w; table; 35c.

———. *The Estimated Lives of Witwatersrand Mines.*—S. Afr. Mng. Jnl., Sept.21, p. 73; 1600 w; 35c.

———. *The Exhausted and Defunct Mines of the Rand.*—S. Afr. Mng. Jnl., Sept.21, p. 80; 100 w; table; 35c.

———. *The Rand's Ore Reserves.*—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 215; 2000 w; $1.

DRILLING AND BORING

Alvermann, P.—*Niederschlagen des aus dem Bohrloch austretenden Staubes;* [Hydraulic precipitation of drill dust from air and rock drills; German Pat. 245,567, April 12,1912; abstract].—Bergbau, Sept.12,1912; p. 525; 400 w*; 35c.

Bansen, Hans (Editor).—*Die Bergwerksmaschinen, II: Gewinnungsmaschinen;* [Mine Machinery; Vol. II: Mining Machinery; by A. Gerke, L. Herwegen, O. Pütz, and K. Teiwes; devoted to dredges, power shovels, stripping machines; hydraulic monitors and elevators; compressors; drills, coal-cutters, and tunneling machines; wedging; electric blasting].—Berlin, 1912; 474 pp; 393 figs; $5.50 (book).

Breger.—*Index to Oil Literature.*—See under "Petroleum and Oils."

Beyschlag, Fr.—*Was sind Geologie und Tiefbohrtechnik einander schuldig?* [What do geology and deep-drilling owe each other?; read to 26th convention Internatnl. Ver. d. Bohringer.].—Organ d. Bohrtechniker, Sept.15,1912; p. 206; 2100 w; 45c.

Blumenberg, H.—*Elastisch gelagerter Schwengel für schwingbare Tiefbohrgestänge;* [An elastically set walking beam for drilling with movable rods; German Pat. No. 245,831].—Organ d. Bohrtechniker, July 1,1912; p. 149,500 w*; 35c.

Buskett, E. W.—*Can for Lowering Drill Steel.*—E. & M. J., July27,1912; p. 155; 250 w*; 25c.

Dandois, —. *Recherches effectués dans la concession de Barbençon;* [Prospecting drill records at the Barbençon lead-zinc concessions, Belgium].—Annales d. Mines (Belgiq.), Vol. 17, No. 4; 1912; p. 1012-1020*; 65c.

Dick, J. E.—*Churn-Drill Examination of Placers;* [Drill and tools, setting up and operation; sampling; calculations, etc.].—Mines & Minerals, Sept.,1912; p. 92; Oct., p. —; 7500 w*; 65c.

Eriksson, H.—*Eine neuzeitliche schwedische Druckluftanlage;* [A compressor plant and drilling costs in Swedish iron mining].—Glückauf, Aug.24,1912; pp. 1368-1372*; 50c.

Fauck, A.—*Die Nachweisung von Steinkohlen Vorkommen in Bohrlöchern;* [The determination of coal seams in drill holes].—Organ d. Bohrtechniker, June15,1912; p. 137; 600 w; 35c.

Fuller, J. T.—*Prevention of Drilling into Misfired Holes.*—E. & M. J., June29,1912; p. 1267; 600 w*; 25c.

Gad, E.—*Tiefbohrtechnisches Wörterbuch;* [Deep-drilling dictionary].—Vienna, 1912; 125 pp; $2.25 (book).

Gawalowski, A. — *Ueber Spülbohren;* [Notes on cable drilling].—Organ d. Bohrtechniker, Nov.1, p. 255; 400 w; 45c.

Gebhardt, V.—*Ueber stossende Tiefbohren auf grosse Teufen;* [Churn drilling for great depths].—Kali Erz & Kohle, June5, 1912; p. 555; 3000 w*; 35c.

Grundy, J.—*The Different Purposes for Which Boring is Used in Mine Operations.*—Sci. & Art of Mng., July20,1912; p. 595; 1000 w; 35c.

Haiek, A.—*Die Vorteile der drehenden Bohrmethode;* [Advantages of rotary drilling; read to Allgm. Bergmannstag, Vienna, Sept.,1912; abstract].—Montanist. Rundschau, Sept.15, p. 956; 1000 w; 50c.

Hanlon, R. Y.—*A Light Prospecting Drill;* [3-in. New Zealand drill for depths not exceeding 50 ft.].—M. & S. P., July6, 1912; p. 17; 500 w; tables; 20c.

Hirschberg, C. A.—*Electric-Air Drills in Japanense Tunnels.*—Compr. Air Mag., Sept., 1912; p. 6549; 800 w*; 25c.

Hirschberg, C. A.—*A Test of Electric-Air Drills in Tunnel Driving in Japan.*—Engg. News, July11,1912; p. 57; 400 w; 25c.

Hore, R. E.—*Machine-Drill Contest at Calumet, Mich.*—Mining & Engg. World, Sept.7,1912; p. 440; 400 w; 10c.

Jacquelin, —. *Note sur l'emploi des marteaux pneumatiques dans l'exploitation dans les mines de houille;* [Use of pneumatic hammer drills, and costs, in coal mines in

France].—Soc. d. Ingrs. Civils France, Mémoires; May,1912; pp. 673-724*; $1.

Levey, C. J.—*Submarine Rock Drilling with Drill Boats;* [Performance records on Detroit River improvement; from "Mine & Quarry"].—Engg. & Contractg., Oct.9,1912; p. 400; 2700 w*; 20c.

Lunt, H. F.—*Foundations for Prospecting Machinery.*—E. & M. J., Nov.16, p. 927; 700 w*; 25c.

Maenicke, Bergassessor.—*Neuere Erfahrungen auf dem Gebiete der Horizontal- und Geneigtbohrungen;* [Recent practices in horizontal and inclined boring].—Kali, Nov. 15,1912; p. 563; 1500 w*; 35 cts.

McCormac, T.—*Churn-Drilling in Shaft* Sinking.—M. & S. P., July13,1912; p. 45; 1000 w; 20c.

McDonald, P. B.—*Use of Sludge Boxes for Diamond Drills.*—Mg. & Eng. World, Nov.23,1912; p. 954; 1200 w*; 10c.

McDonald, P. B.—*Diamond Drilling in Exploration of Ore Deposits.*—Mex. Mng. Jnl., Oct.,1912; p. 29; 3000 w*; 25c.

McDonald, P. B.—*Steam Hammer Drills;* [Use in Michigan iron mines].—E. & M. J., Sept.28,1912; p. 584; 600 w*; 25c.

Michael, R.—*Die Temperaturmessungen im Tiefbohrloch Czuchow;* [Temperature measurements in the world's deepest borehole at Czuchow, Silesia; from Kgl. Preuss. Geol. L-A., Jahrb. Vol. 31, Part 2, No. 1].—Kohl & Erz, Oct.21, p. 1106; 2200 w*; 35c.

Mitchell, T. E.—*The Mitchell Dust Catcher;* [Used on drills at Butte].—E. & M. J., July27,1912; p. 157; 250 w*; 25c.

Muir, L. S.—*Short-Round Drilling;* [Advantages urged for "One man, one machine" mining on Rand stopes].—S. Afr. Mng. Jnl., Oct.19, p. 213; 2500 w; 35c.

Neumann, —. *Die Verbrennungskraftmaschine in der Erdölbohrindustrie;* [Use of combustion engines (oil and gas) in oil well drelling].—Organ d. Bohrtechniker, Oct.15, p. 233; 3600 w*; 45c.

Parsons, A. T.—*New Method of Rotary Drilling;* [From Western Engg.].—Oil Age, Sept.27,1912; p. 6; 1000 w*; 20c.

Pierce, T. R.—*Expansion Bit for Drilling Coal.*—Coal Age, Sept.7,1912; p. 331; 200 w; 20c.

Perkins, Frank C.—*Horizontal Mine Boring Under Pressure.*—M. & M., Dec., 1912; p. 250; 1200 w*; 35c.

Perkins, Frank C.—*An Electrically Driven Percussion Drill.*—Can. Mg. Jnl., Dec.1, 1912; p. 810; 500 w*; 30c.

Perkins, Frank C.—*Boring Long Holes in Mine Workings.*—Pac. Mg. Jnl., Dec., 1912; p. 105; 2500 w*; 30c.

Perret, L.—*Prospecting Frozen Alluvial Deposits in Russia;* [from Instn. of Mng. & Met'gy, Bull. 92].—Mining & Engg. World, June15, p. 1247; 4000 w*; 10c.
German: Zentral Verbd. Bergbau Betriebsl. Oestr., Zts.; Nov.1, p. 684; 4000 w; 45c.

Popeke, A. G.—*A Comparison Between Portable Electric Drills and Portable Air Drills.*—El. Jnl., No. 6, 1912; pp. 535-539*; 50c.

Rae, C. C.—*Advantages and Disadvantages of Rotary Well-Drilling.*—Oil Age, June21; pp. 7, 9, 10, 14; 3000 w; 20c.

Raky, A.—*Zur Spülbohrfrage;* [Churn-rinsing drilling system in oil-well boring].—Organ d. Bohrtechniker, Aug.15,1912; p. 182; 2500 w*; 45c.

Rice, C. T.—*Copper Mining Practice at Lake Superior;* [(3), Chiefly on drilling practice].—E. & M. J., Aug.3,1912; p. 217; 5000 w; 25c.

Rice, C. T.—*Coke Furnace for Heating Drills.*—E. & M. J., July27,1912; p. 157; 800 w*; 25c.

Ruhl, O.—*Prospect Drilling in the Joplin District, Mo.*—Mex. Mng. Jnl., Oct.,1912; p. 40; 2800 w; 25c.

Rule, R. A.—*Arm for Drill Columns.*—E. & M. J., July27,1912; p. 158; 150 w*; 25c.

Saueracker, K.—*Ueber Seilbohren;* [Cable drilling].—Montanist. Rundschau, Sept. 1,1912; p. 850; 2500 w; 45c.

Schneider, O.—*Die Förderung der Geologie durch Tiefbohrungen;* [Advances in geological science effected by borings; read to 26th convention, 1912, Internatnl. Ver. Bohrtechniker].—Organ d. Bohrtechniker, Nov.1, p. 245; 4300 w; 35c.

Smit, J. K.—*Brazilian Carbons;* [How to appraise different varieties for drilling value.—Mines & Minerals, July,1912; p. 732; 1600 w; 35c.

Stauber, I. J.—*Churn Drilling in New Mexico;* [Burro Mtns.; 114 holes; total depth, 62,208 ft.; cost, $2.18 per ft.].—E. & M. J., Sept.14,1912; p. 501; 2700 w*; 25c.

Steele, H.—*Cost of Diamond Drill Equipment.*—E. & M. J., July13,1912; p. 77; 1500 w; 25c.

Stein, P.—*Bohren und Oelgewinnung auf den norddeutschen Erdölfeldern;* [The north German oilfields, with notes on drilling practice and oil recovery].—Petroleum, Sept.4, p. 1306; 900 w; 45c.

Strobl, A.—*Natural Gas in Hungary and the Gas Well at Kissarmas;* [Read to Soc. of Hungarian Engrs. & Archts. of Amer.; extract on closing the Kissarmas well].—E. & M. J., July27,1912; p. 149; 2400 d*; 25c.

Storms, Wm. H.—*The Rotary Drill in the Oil Fields.*—Mining & Engg. World, Aug.31, 1912; p. 390; 1600 w; 10c.

Titus, R.—*Ueber Enddurchmesser bei Bohrungen;* [The diminution in bottom diameter of bores, its causes and methods of treatment].—Petroleum, Oct.2, p. 17; 3000 w*; 45c.

Titus, R.—*Reibungswiderstand des Wassers beim Fallen der Bohrzeugnisse;* [Resistance of the water cushion against the drill stroke in deep boring].—Organ d. Bohrtechniker, Aug.15,1912; p. 184; 1000 w*; 45c.

Titus, R.—*Ein neues Seilbohrsystem;* [New cable drilling system for oil wells, etc.].—Petroleum, Sept.4, p. 1348; 2000 w*; 45c.

Titus, R.—*Zur Exzentermeisselkonstruktion;* [Notes on the excentric-bit type of drill construction].—Organ d. Bohrtechniker, Sept.15,1912; p. 210; 500 w; 45c.

Titus, R.—*Die Dehnung des Gestänges und ihr Einfluss auf die Schlagkraft des Bohrzeuges;* [The ductility of drill rods and influence on the stroke-effect of the drill].—Organ d. Bohrtechniker, Sept.1,1912; p. 195; 1000 w; 45c.

Titus, R.—*Kurbel und Exzenter bei steifem Gestänge mit festverbundenem Bohrzeug;* [Crank and eccentric with rigid rods and firmly attached bit].—Organ d. Bohrtechniker, June15,1912; p. 133; 1200 w; 35c.

Titus, R.—*Versetzen des Meissels bei steifem Gestänge;* [Setting the bit in churn drilling with rigid rods].—Organ d. Bohrtechniker, July1,1912; p. 145; 1200 w; 35c.

Titus, R.—*Eisen und Stahl als Hohlgestänge;* [Iron vs. steel for drilling rods].—Organ d. Bohrtechniker, Aug.1,1912; p. 169; 1000 w; 45c.

Ward, J. P.—*A Defence of Large Machines;* [for local conditions in Rand stopes].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 53; 600 w*; $1.

Waters, C. H.—*Prospecting Drill Records;* [Drill records in dredging gravels to show values, gravel character, bed-rock contour, and water levels].—M. & S. P., June15,1912; p. 833; 500 w*; 20c.

Willans, C. T.—*Der Drehbohrer auf Neu Seeland;* [Rotary drilling in the New Zealand oil fields; from "Petroleum Review"].—Organ d. Bohrtechniker, Nov.1, p. 254; 500 w; 45c.

White, E. E.—*Surveying and Sampling Diamond-Drill Holes;* [in Lake Superior copper country].—Amer. Inst. Mng. Engrs., Bull. 71; Nov.,1912; pp. 1277-1298*; $1.15.

Wohlenberg, E.—*Trail Construction and Location;* [from Forest Club Annual of Univ. of Nebraska, reprinted in "American Forestry," Aug.,1912].—E. & M. J., Nov.16, p. 939; 800 w; 25c.

Young, E. L.—*A Novel Way of Teaching Rock Drilling;* [at Univ. of Mo. School of Mines].—Compr. Air Mag., Sept., 1912; p. 6545; 1000 w*; 25c.

Young, L. E.—*Methods of Teaching Rock Drilling.*—E. & M. J., June22,1912; p. 1227; 1500 w*; 25c.

Dr. G.—*Neuerungen auf dem Gebiete der Bohrtechnik;* [Innovations in drills, bits, and oil-well drilling accessories].—Petroleum, Sept.4, p. 1353-1361; 4000 w*; 45c.

M.—*Elektrisch betriebener Gesteinsbohrer;* [Wagner electric rock drill].—Ton Industrie Ztg., June8,1912; p. 924; 250 w*; 30c.

"Practical Miner."—*Expansion Bit for Drilling Coal.*—Coal Age, June29,1912; p. 1255; 400 w; 20c.

———. *A Drill Contest;* [Sullivan, Holman and Rand drills at the Iron Mines, Bessemer, Ontario].—Canadian Mng. Jnl., Oct.15, p. 716; 1000 w; tables, 25c.

———. *"California Special" Rotary Drilling Machinery.*—Oil Age, Aug.2,1912; p. 2; p. 6; 800 w*; 20c.

———. *Car for Tramming Drill Steel;* [in Joplin district, Mo.].—E. & M. J., Aug. 31,1912; p. 395; 100 w*; 25c.

———. *Combined Percussion and Rotary Well-Boring Machine for Argentina.*—Engnrg., July5,1912; p. 16; 1000 w; 35c.

———. *Copper Range Drill Jack and Post.*—E. & M. J., Aug.31,1912; p. 396; 200 w*; 25c.

———. *Costs of Machine Drilling in Alaska;* [at United and Mexican mines].—E. & M. J., July6,1912; p. 18; 500 w; 25c.

———. *Deepening and Scaling a 20-inch Well;* [Stourbridge, U. K. water supply].—Engg. Record, July13,1912; p. 51; 1000 w; 20c.

———. *Diagram for Determining the Volume of Air Required by Air Drills at Various Pressures and Altitudes;* [tables of Norwalk Iron Works Co.].—Engg. & Contractg., Aug.14,1912; p. 185; 200 w*; 20c.

———. *Drill-Rigging Contest at Calumet, Mich.*—E. & M. J., Sept.14,1912; p. 510; 600 w*; 25c.

———. *Drilling and Pumping by Electricity;* [Midway oil field, Calif.].—Oil Age, Oct.18, p. 5; 1000 w; 20c.

———. *Dust Preventive Measures for Mechanical Drills;* [Flottmann pneumatic device and spray].—Iron & Coal Trades Rev., Oct.11, p. 590; 1000 w*; 35c.

———. *Elektrische Bohrer für Arbeiten in Steinbrüchen;* [Electric drills for quarrying; from "Quarry"].—Kohle & Erz, Sept. 16,1912; p. 955; 1200 w; 35c.

———. *Joplin Method of Temperng Drill Bits.*—E. & M. J., July13,1912; p. 60; 600 w*; 25c.

———. *Leyner Drill Sharpener.*—Iron & Coal Trades Rev., June28,1912; p. 1036; 500 w*; 35c.

———. *Marquette Iron Range Continued Progress.*—Mg. & Engg. World, Dec.7, 1912; p. 1031; 4000 w*; 10c.

———. *Rope Sockets.*—Well Drillers' News, Aug.,1912; p. 34; 1000 w*; 20c.

———. *Schwierigkeiten mit einer Tiefbohrung;* [Some difficulties in the 4600-ft. boring of the Lakeview-2 Co. in the Maricopa field, Cal.].—Organ d. Bohrtechniker, Oct.1, p. 231; 500 w; 35c.

———. *Some Improvements in Drill Sharpeners;* [Word sharpener, in use at Champion mine, Lake Superior copper district].—E. & M. J., July6,1912; p. 11; 1500 w; 25c.

———. *Steel Oil Well Derricks and Drilling Rigs in California.*—Oil Age, Oct.25, p. 6; p. 14; 1500 w*; 20c.

———. *Suspending a Diamond Drill in a Stope.*—E. & M. J., Nov.23,1912; p. 975; 800 w*; 25c.

———. *Taking Samples from Drill Holes.*—E. & M. J., July13,1912; p. 61; 750 w; 25c.

———. *Testing Air Consumption of Drills.*—E. & M. J., June29,1912; p. 1268; 500 w*; 25c.

———. *The Butterfly-Valve "Jackhammer" Drill.*—Mng. Engg., Sept.,1912; p. 148; 1200 w*; 25c.

———. *The Butterfly Valve; a New Type of Rock Drill.*—Mex. Mng. Jnl., July, 1912; p. 43; 1200 w; 25c.

———. *The Konomax Drill.*—S. Afr. Mng. Jnl., Jly6,1912; p. 716; 2000 w; 35c.

———. *The new Hardy-Simplex Hammer Drill.*—Coll'y Guardn., Aug.9,1912; p. 280; 1500 w*; 35c; Also in Iron & Coal Trades Rev., Aug.9,1912; p. 203; 1000 w*; 35c.

———. *The Siskol Drill in South Africa.*—S. Afr. Mng. Jnl., Anniversary No., Sept., 1912; p. 165; 1200 w; $1.

———. *The World's Deepest Boreholes and Mines.*—S. Afr. Mng. Jnl., May25,1912; p. 463; 1000 w*; 35c.

Mechanical Cutters

Banson, H. (Editor).—*Mine Machinery, Vol. II: Mining Machinery* [in German].—See under Mine: Miscellaneous and General.

Cameron, J. S.—*Machine Mining in Oklahoma.*—Coal Trade Bull., Oct.15, p. 29; 1800 w*; 25c.

Littler, W. and others.—*Coal Cutting Machinery; Stanley Heading Machine; Siskol Puncher; Electric Rotary Cutter.*—Sci. &

Art. of Mng., Sept.14,1912; p. 68; 700 w*; 35c.

Liwehr, A. E.—*Radschrämmaschine oder Stangenabbauschrämmaschine?* [Rotary vs. puncher coal-cutters?].—Montanist. Rundschau, Sept.15,1912; p. 929; Sept.20, p. 1001; 4800 w*; 75c.

Mayor, S.—*Die maschinelle Kohlengewinnungsarbeit mit besonderer Berücksichtigung der Grubenverhältnisse in Süd-Wales;* [Machine Coal Mining, with Special Reference to Mining Conditions in South Wales; translated from the English by A. Holan].—Witkowitz; 1912; 88 pp; $2 (book).

McMahon, S.—*Solving a Low-Coal Problem;* [Machine mining of a 30-inch seam, Indiana county, Pa.].—Coal Age, Aug.24, 1912; p. 246; 800 w; 20c.

Redmayne, H.—*Output of Minerals and the Use of Coal-Cutting Machinery in* 1911 *in U. K.;* [from official report].—El. Rev. (London), Sept.6,1912; p. 395; 2100 w; 35c.

Spence, W. L.—*A Rope-Driven Coal Cutter;* [Read to Instn. of Mng. Engrs., London, June.1912].—Coll'y Guardn., June7, 1912; p. 1134; 4000 w*; 30c. Also in Iron & Coal Trades Rev., June7; p. 910; 4000 w*; 30c.

Thomas, G. W.—*Power Consumption of Coal-Cutting Machines;* [Electric; from "Mine & Quarry," June].—Coal & Coke Op., June27,1912; p. 413; 1000 w; 25c. Also in Coal Trade Bull., July15, p. 28; 500 w; 25c.

Vogel and Losseau.—*Essais de havage mécanique;* [Tests of Pick-Quick electric coal cutter on the Petite Pieuse coal seam at 380 meters depth in Monceau-Fontaine colliery, Belgium].—Annales d. Mines (Belgiq., Vol. 17, No. 4; 1912; p. 1099; 3000 w; 65c.

Vrancken and Mollinghen.—*Emploi de la haveuse à barre "Pick-Quick," à commande électrique;* [Use of the Pick-Quick electric-driven coal puncher at Bascoup colliery, Belgium].—Annales d. Mines Belgiq., Vol. 17, No. 3; 1912; p. 661-669*; 4000 w*; 90c.

"Tyke."—*Coal Cutting Machines;* [Types and methods of using and mining].—Sci. & Art. of Mng., June22,1912; p. —; July6, p. 560; 2500 w*; 50c.

"Tyke."—*Use of Coal Cutting Machines in Working a Thin Seam, Dipping 2 ins. per Yard, Using Longwall system and Face Conveyors.*—Sci. & Art of Mng., June22, 1912; p. 538; 2400 w; 35c.

———. *A New Mining Machine;* [Hoadley-Knight machine to simultaneously mine and granulate the coal face].—Coal Age, July13,1912; p. 49; 1000 w*; 20c.

———. *Coal-Cutting Machinery;* [Progress in U. K.; digest of H. M. Inspectors of Mines' reports for 1911].—Iron & Coal Trades Rev., Aug.16,1912; p. 247; 1200 w; 35c.

———. *Difficulties with an Electric Coal Cutter.*—Coal Age, July6,1912; p. 12; 500 w; 20c.

———. *Electric Coal Cutters;* [Difficulties in working].—Times Engg. Suppl., Vol. 8, 1912, p. 21; 1000 w; 35c.

———. *Electricity in Stone-Cutting Plants;* [Disc saws, planers, cranes, etc., in sandstone plant of J. Tait Stone Co., Chicago].—El. Rev. (Chicago), Aug.17,1912; p. 295; 3000 w*; 20c.

———. *Using Channelers for Cutting Condenser Well Trenches.*—Engg. Record, Oct.12, p. 403; 600 w*; 25c.

EXPLOSIVES AND BLASTING

Bansen, Hans (Editor).—*Die Bergwerksmaschinen. II: Gewinnungsmaschinen;* [Mine Machinery; Vol. II: Mining Machinery; by A. Gerke, L. Herwegen, O. Pütz, and K. Teiwes; devoted to dredges, power shovels, stripping machines; hydraulic monitors and elevators; compressors; drills, coal-cutters, and tunneling machines; wedging; electric blasting].—Berlin, 1912; 474 pp; 393 figs; $5.50 (book).

Berthelot, D., and H. Gaudechon.—*Décomposition photolytique des poudres sans fumée par les rayons ultra-violets; Influence des stabilisants;* [Photolytic decomposition of smokeless powders by ultra-violet rays; stabilizing influence of amyl alcohol and diphenylamine; examination of damaged nitro-glycerine and cellulose].—Acad. d. Sci., Paris, C-R., No. 4, 1912; p. 201-203.

Concklin, B. M.—*Powder Chutes for Open Pits;* [in Mesabi range].—E. & M. J., Sept. 7,1912; p. 441; 150 w*; 25c.

Daniels, J.—*A Locked Cap Box for Mine Use.*—Coal Age, Aug.17,; p. 223; 400 w*; 20c.

Dautriche, H.—*Eigenschaften der drei Sprengstoffe Pikrinsäure, Trinitroluol und Trinitrobenzol;* [Some properties of the 3 explosives, picric acid, trinitroluol, and trinitrobenzol; German translation from Mém. d. Poudres & Salpêtres, Vol. 16, pp. 27-39].—Zts. f. Sprengstoffw., Oct.15, p. 401; 3000 w; 35c.

Dautriche, H. — *Ueber einen neuen Sprengstofftyp;* [A new explosive of N-type; 70% sodium nitrate; 30% nitronaphthalin; from Mém. d. Poudres & Salpêtres, Vol. 16, pp. 1-13].—Zts. f. Sprengsoffwesen, Nov.1, p. 427; 3000 w*; 35c.

Dean, Samuel.—*Prevention of Coal.-Dust Explosions.*—Coal Age, Nov.30,1912; p. 756; 4000 w*; 20c.

Denker, Wm. — *Unfallverhütung bei Sprengarbeiten in Steinbrüchen;* [Accident prevention in blasting and the handling of explosives in quarries; with special reference to the commoner explosives and exploders, and legal regulations].—Berlin, 1912 (2d edition); 205 pp; $1 (book).

Denker, Dr.—*Schutz gegen Sprengstücke;* [Blasting in quarries, and protection against accident from flying rock].—Zts. f. Schiess & Sprengstoffwesen, June15,1912; p. 241; 2100 w; 35c.

Doyle, T.—*Handling Powder in Mines;* [Describes miner's supply box].—Coal Age, Aug.10,1912; p. 202; 500 w*; 20c.

Esselstyn, J. N.—*Electric Powder Warmer.*—E. & M. J., Oct. 19, p. 734; 250 w*; 25c.

Fuller, J. T.—*Prevention of Drilling into Misfired Holes.*—E. & M. J., June29,1912; p. 1269; 600 w*; 25c.

Gaskell, T.—*Electric vs. Safety Fuse Shot-Firing.*—Sci. & Art of Mng., June22, 1912; p. 544; 750 w; 35c.

Gaskell, T.—*Mis-Shots;* [Methods of procedure].—Sci. & Art of Mng., Sept.14,1912; p. 65; 1000 w; 35c.

Gunsolus, F. H.—*Notes on Shotfiring by Electricity.*—Coal Age, Dec.7,1912; p. 787; 2500 w; 20c.

Hall, Cl., and S. P. Howell.—*Magazines and Thaw Houses for Explosives.*—U. S. Bur. Mines, Techn. Paper No. 18; 1912; 34 pp.*; 20c.

Hall, Cl.—*The Need of Uniformity in Testing Explosives.*—Internatnl. Asso. f.

Testg. Materials, Vol. II, No. 13; 1912; 12 pp.; 95c.

Herz, E.—*Knallquecksilberfreie Zündsätze;* [Fuse with mercury-free fulminates].—Zts. f. Sprengstoffw., July15,1912; p. 284; 1000 w; 35c.

Hurter, C. S.—*The Use of Explosives in the Tropics.*—Mex. Mng. Jnl., Oct., p. 19; 4500 w; 25c.

Klein, G.—*Ein neuer Vorschlag über die Einrichtung des elektrischen Schiessbetriebes beim Abteufen;* [Proposed improvement in electric blasting in shaft-sinking].—Kali, July15,1912; p. 354; 1800 w; 45c.

Langenscheidt, F.—*Darstellung von Trinitrotoluol;* [Manufacture of trinitrotolluol].—Zts. f. Sprengstoffwesen, Nov.1,1912; p. 425; 3200 w*; 35c.

Loeffler, P.—*Entwickelung und Stand der modernen Sprengstoffindustrie;* [Development and status of the modern explosives industry; read to Allgm. Bergmannstag, Vienna, Sept., 1912; abstract].—Montanist. Rundschau, Sept.15,1912; p. 953; 800 w; 50c.

Mawdsley, W. H.—*Neutralizing Blasting Fumes.*—E. & M. J., Nov.2, p. 832; 300 w; 25c.

Parker, E. W.—*The Production of Coal in* 1911; [Includes notes on shooting off the solid].—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 207 pp.; 20c.

Price, A., and Wm. Pryse.—*New Shot-Firing Appliance;* [Improved copper detonator shield to minimize misfires in electric shooting].—Iron & Coal Trades Rev., July12,1912; p. 12; 1200 w*; 35c. Also in Coll'y Guardn., July12, p. 71; 1000 w; 35c.

Rasching, F.—*Wasserlösliches Schiesspulver;* [Water-soluble blasting powder; read to Ver. Deu. Chemiker, Freiburg, 1912].—Bergbau, July18,1912; p. 407; 1400 w; 35c. Also in Chemiker Ztg., June6,1912; p. 632; 1500 w; 35c.

Rice, C. T.—*Magazines for Storing and Thawing Dynamite;* [in Missouri].—E. & M. J., Aug.31,1912; p. 397; 1500 w*; 25c.

Rudeloff, J.—*Die Gefahren beim Gebrauch von Sprengstoffen und deren Verminderung;* [Dangers in the use of explosives; and precationary measures].—Zts. f. d. Sprengstoffw., Sept.15,1912; p. 357; 4000 w; 45c.

Rhys, R. T.—*Reducing Ventilation When Firing.*—Coal Age, July13,1912; p. 57; 2200 w; 20c.

Simpson, C.—*Chief Causes of Miss-Shots in Electric Blasting.*—Sci. & Art. of Mng., July6,1912; p. 569; 600 w; 35c.

Simpson, C.—*Dangers of Shot-Firing in Mines Containing Inflammable Gas.*—Sci. & Art of Mng., July20,1912; p. 591; 600 w; 35c.

Snelling, W. O., and C. Hall.—*The Effect of Stemming on the Efficiency of Explosives.*—U. S. Bur. Mines, Techn. Paper No. 17; 1912; 20 pp.*; 20c.

Sutton, J.—*Blownout Shots.*—Coal Age, Aug.24,1912; p. 267; 400 w; 20c.

Wittich, Lucius L.—*Electric Shot Firing in Coal Mines.*—M. & M., Dec.,1912; p. 243; 1250 w*; 35c.

Woltersdorf.—*Medziankit;* [Medziankit, a new explosive].—Oberschles. Berg- & Hüttenm. Ver., Zts.; Aug.,1912; p. 341; 2100 w; 45c.

———. *A Blasting Bulletin Board;* [In southeast Missouri lead mines].—E. & M. J., Sept.28,1912; p. 587; 600 w*; 25c.

———. *Accidents from Explosives in 1911;* [Abstract from 36th annual report, H. M. Inspectors of explosives, Cd. 6240].—Coll'y Guardn., June28,1912; p. 1293; 3000 w; tables; 35c. The report is also abstracted in Iron & Coal Trades Rev., June 28, p. 1032; 2500 w; 35c.

———. *Adinau Safety Powder;* [Adinite].—E. & M. J., July27,1912; p. 175; 900 w; 25c.

———. *An Explosion Due to Shot-Firing.*—Coal Age, Nov.30,1912; p. 760; 2000 w; 20c.

———. *Das Imperialit, ein neuer Sicherheitssprengstoff;* [Imperialite, a new safety explosive].—Kohle & Erz, Sept.16,1912; p. 959; 500 w; 35c.

———. *Detonator Troubles on the Panama Canal.*—E. & M. J., Oct.12, p. 687; 1200 w; 25c.

———. *Die Entzündung von Leuchtgas und von Methan durch plötzlich auftretende elektrische Funken;* [The ignition of illuminating gas and of methane by suddenly occurring electric sparks] (Translation from Iron & Coal Trades Rev. of lecture delivered before the Institute of Mining and Mechanical Engineers of the North of England).—Zts. Zentral-Verbd. Bergbau-Betriebsl., Dec.1,1912; p. 737; 3000 w*; 45c.

———. *Drift Round in Flat Sediments;* [Placing drift holes in s. e. Missouri lead mines in flat-lying dolomite].—E. & M. J., Sept.7,1912; p. 441; 500 w*; 25c.

———. *Explosives in Coal Mines;* [Order of British Home Secretary under the Coal Mines Act of 1911 regulating the supply, use and storage of explosives].—Iron & Coal Trades Rev., June7,1912; p. 926; 2800 w; 35c.

———. *Explosives in Coal Mines;* [New British order].—Mng. Engg., July,1912; p. 97; p. 104; 4000 w; 35c. Also in Sci. & Art of Mng., July6, p. 558; 2100 w; 35c.

———. *Explosives Industry in Canada.*—Canada Dept. Mines, Mines Branch, Rep. f. 1911; pp. 174-195.

———. *Fortschritte auf dem Gebiete der Minenzündung;* [Progress in electric blasing in mines].—Kohle & Erz, Oct.14, p. 1090; 800 w*; 35c.

———. *Fortschritte auf dem Gebiete der Minenzündung;* [Progress in blasting in mines; Schaffler electric exploders].—Montanist. Rundschau, Sept.15,1912; p. 967; 1000 w*; 50c.

———. *40 Trains of Gypsum in One Blast;* [Review blasting and development conditions at Nephi plant, Utah].—Rock Products, Aug.1912; p. 50; 400 w; 35c.

———. *Methods of Making a 350,000-cu. yds. Blast at Piedra, Cal.*—Engg. & Contractg., July24,1912; p. 96; 600 w*; 20c. Also in Rock Products, July, p. 47; 1000 w*; 30c. Also in Stone, July, p. 364; 1200 w*; 35c.

———. *New Shot-Firing Regulations;* [Editorial discussion of British regulations].—Iron & Coal Trades Rev., June14, 1912; p. 967; 2000 w; 35c.

———. *Permissible Explosives; Monobel and Carbonite.*—M. & M., Dec.,1912; p. 252; 2200 w; 35c.

———. *Practical Test of Strength of Detonators.*—E. & M. J., Oct.26, p. 784; 300 w*; 25c.

———. *Stygia, a New Brazilian Explosive.*—Coal Age, July13,1912; p. 53; 500 w; 20c.

———. *The New Explosives Order;* [Editorial discussion].—Coll'y Guardn., June21,1912; p. 1251; 1000 w; 35c.

———. *Use of Squibs in Shot-Firing in Open-Light Mines.*—Coll'y Guardn., Nov.8, p. 952; 1000 w; 35c.

———. *Wicking Method of Lighting Fuse.*—E. & M. J., July20,1912; p. 107; 500 w*; 25c.

SINKING AND DRIVING

Shafts and Shaft Sinking

Adams, G. F.—*Conservation and Future Trend of Coal-Mining in India;* [Discusses among other things deep shafts, deep mining, and temperatures at depth; presidential address].—Mng. & Geol. Inst. of India; Trans.; Vol. 7, No. 1; 1912 pp. 17-41; $1.

Allard, A. F.—*Fireproof Shaft, Vermillion Mine;* [Bunsen Coal Co., Westville, Ill.].—Mines & Minerals, Oct.,1912; p. 130; 1800 w*; 35c.

Atkinson, W. H.—*Shaft Sinking By Freezing to Penetrate Watery Sand Beds.*—Mng. Engg., July,1912; p. 113; 1000 w*; 35c.

Auld, F. C.—*Two Concrete-Lined Mine Shafts;* [at Annabelle, W. Va.].—Coal Age, July13,1912; p. 43; 1500 w*; 20c.

Bamberger, Clarence G.—*The Mining of Copper Deposits.*—Mex. Mg. Jnl., Dec., 1912; p. 19; 2000 w; 25c.

Bartonec, Fr.—*Ueber die Gewältigungsarbeiten des Schachtes "Campi" in Bochnia;* [The re-sinking of the Campi shaft at the Bochnia salt mines, Austria].—Montanist. Rundschau, Sept.20,1912; p. 1009; 1800 w*; 45c.

Bartonec, F.—*Schacht "Campi" in Bocknia;* [The "Campi" shaft in the Bochnia salt mine, Galicia, and the cave-in of 1912].—Oestr. Zts. f. Berg- & H-wesen, May4, 1912; p. 248; 1000 w*; 45c.

Bates, B. R.—*Cost of the Santa Ramona Shaft;* [Guadalupe y Calvo, Chihuahua].—M. & S. P., Aug.10,1912; p. 179; 1000 w; 20c.

Baumstark, F.—*Abdichtung von Schachtauskleidungen in Beton und Eisenbeton;* [Concrete and reinforced-concrete lining to render shafts waterproof].—Armierter Beton, No. 4, Vol. 5, 1912; pp. 151-154*; 75c.

Beaupain, —. *Signalisation électrique au puits d'extraction;* [Electric signalling in shaft sinking at the Six Bonniers collieries, Belgium].—Annales d. mines (Belgiq.), Vol. 17, No. 4; 1912; pp. 1129-1133*; 65c.

Blau, E.—*Hochdruck-Kreiselpumpen für Grubenwasserhaltungen und für Abteufzwecke;* [High-pressure centrifugal pumps for mine drainage and in shaft sinking; Sulzer types].—Montanist. Rundschau, Aug. 1,1912; p. 755; Aug.15, p. —; 4000 w*; 75c.

Blandford, T.—*Ferro-Concrete Lining to Mine Shafts;* [Plenmeller collieries, Northumberland].—Roy. Soc. of Arts., Jnl., Sept. 27,1912; p. 1026; 400 w; 35c.

Brown, W. L.—*Steel Sets in Inclined Shafts.*—M. & S. P., Sept.7,1912; p. 296; 1200 w*; 20c.

Calkins, F. E.—*Concrete Shaft Lining.*—M. & S. P., Nov.2, p. 568; 900 w; 20c.

Cory, Edward N.—*Raising Shaft at Rolling Mill Mine, Michigan;* [Paper read before L. S. Mg. Inst.; abstract].—Mg. & Eng. World, Nov.30,1912; p. 1003; 1500 w; 10c. Also in Engg. & Contractg., Oct.2, 1912; p. 373; 600 w*; 20c.

Dandois, —. *Revêtement d'un burquin en voussoirs de beton armé;* [Reinforced concrete lining for portions of the circular shaft at Réunis de Charleroi collieries, Belgium].—Annales d. Mines (Belgiq), Vol. 17, No. 4; 1912; p. 1006; 500 w*; 65c.

Davenport, L. D.—*Shaft Timbering in Minnesota Iron Mines.*—E. & M. J., Nov.2, p. 830; 800 w*; 25c.

Diancourt, —. *Tiefkälteverfahren zum Schachtabteufen;* [Congelation process in shaft sinking].—Berg- & H-m. Rundschau, Sept.20,1912; p. 273; 5500 w; 35c.

Donaldson, R. J.—*Shaft Plumbing.*—Mng. & Engg. Rev., Oct., p. 15, 300 w*; 35c.

Edwards, Frank R.—*Steel Timbering in an Inclined Shaft.*—E. & M. J., Nov.30, 1912; p. 1023; 1000 w*; 25c.

Edwards, Geo. E.—*Scientific Management on the Menominee Range;* [Describes the up-to-date methods of operation at the properties of the Munro Iron Mg. Co.].—Mg. & Eng. World, Nov.23,1912; p. 947; 4000 w*; 10c.

Elwitz, —. *Verwendung von Eisenbeton beim Schachtbau an Stelle von Mauerwerk;* [Use of reinforced concrete to replace brickwork in shafts].—Glückauf, June8, 1912; p. 910; 1600 w*; 50c.

Fletcher, C. R.—*Concrete Mining Shafts.*—Los Angeles Mng. Rev., Nov.2, p. 7; 1000 w; 20c.

Fuller, J. T.—*Prevention of Drilling into Misfired Holes.*—E. & M. J., June29,1912; p. 1267; 600 w*; 25c.

Fuller, J. T.—*Timbering a Small Shaft;* [Rapid method for small or temporary shafts].—Mines & Minerals, July,1912; p. 743; 1500 w*; 35c.

George, G.—*Note on Deep Shafts;* [Problems of economy in 900 ft. shafts in India coal fields].—Mng. & Geol. Inst. of India, Trans.; Vol. 7, No. 1; 1912; p. 70-75; 1200 w; $1.

Gmeyner, E.—*Ueber tonnlägige Förderschächte und eine neuartige Schleppschachtförderung;* [Advantages of inclined over vertical shafts; and the Gmeyner system of chain winding; read to Bergmannstag, Vienna, 1912; abstract].—Montanist. Rundschau, Sept.15,1912; p. 964; 400 w; 50c.

Gröting, H.—*Schachtabteufen bei grossem Salzwasserzufluss;* [Case of shaft-sinking against heavy inflow of salt water].—Bergbau, Oct.17, p. 585; 600 w*; 35c.

d'Haenens, —. *Emploi dans les travaux souterrains d'un compresseur mobile;* [Use of a portable compressor underground, Nord de Charleroi colliery, Belgium; used in supplying air to hammer drills in shaft sinking].—Annales d. Mines Belgiq., Vol. 17, No. 3; 1912; p. 656; 500 w*; 90c.

d'Haenens, —. *Creusement des puits Nos. 9 et 10 du siége de St. Vaast;* [Raky congelation system in sinking Shafts 9 and 10, St. Vaast mine, La Louvière & Sars-Longchamps collieries, Belgium].—Annales d. Mines Belgiq., Vol. 17, No. 3; 1912; p. 639-652*; 90c.

Handley, J.—*Shaft Surveying and New Plummets;* [From Canadian Mng. Jnl.].—Mex. Mng. Jnl., Oct.,1912; p. 44; 2400 w; 25c.

Hardy, L.—*Plancher de sureté d'avalaresse et plancher volant;* [Descending and swinging platforms or scaffoldings in sinking the new Espinoy shaft, Belgium].—Annales d. Mines (Belgiq.), Vol. 17, No. 4, p. 1008; 600 w*; 65c.

Henderson, H. G.—*Survey Method of Locating a Shaft.*—E. & M. J., Nov.23,1912; p. 975; 500 w*; 25c.

Heym, W.—*Vertikale oder geneigte Bergbauschächte;* [Vertical vs. inclined shafts].—Kali Erz & Kohle, Sept.25,1912; p. 958; 1200 w; 35c.

Heys, W.—*Principal Points to Be Considered Before Laying Off Position of Shafts.*—Sci. & Art of Mng., July20,1912; p. 596; 1000 w; 35c.

Hornady, W. D.—*The Santa Maria Graphite Mines, Mexico.*—Mg. & Eng. World, Dec.7,1912; p. 1041; 3000 w*; 10c.

Hubbard, L. L.—*Foot-Wall Shafts in Lake Superior Copper Mines;* [Read to Lake Superior Mng. Inst.; abstract].—E. & M. J., Sept.21,1912; p. 539; 1200 w; 25c.

Hutchinson, F.—*Surface Arrangements at the Top of a Circular Sinking Shaft.*—Sci. & Art of Mng., Oct.26, p. 141; 600 w*; 35c.

Hutchinson, F. — *The Kind-Chaudron Method of Shaft Sinking.*—Sci. & Art of Mng., Nov.9, p. 165; 1000 w*; 35c.

Hutchinson, F.—*Arrangement of Beams or Buntons in Shaft Sump to Receive Cages and Conductors.*—Sci. & Art of Mng., Oct. 12, p. 117; 600 w*; 35c.

Johnson, R. G.—*A Water-Tight Timber Shaft.*—Coal Age, Aug.10,1912; p. 178; 1000 w*; 20c.

Kerr, M. B.—*Economical Shaft Sinking;* [Mother Lode, Calif.].—Mines & Minerals, Oct.,1912; p. 151; 600 w*; 35c.

Klein, G.—*Ein neuer Vorschlag über die Einrichtung des elektrischen Schiessbetriebes beim Abteufen;* [Proposed improvement in electric blasting in shaft-sinking].—Kali, July15,1912; p. 354; 1800 w; 45c.

König, —. *Elektromotoren zum Betriebe von Abteufpumpen nebst Schaltapparaten;* [Electro-motors and switching attachments in sinking pumps, and their operation].—Elektrot. Anzgr., May23,1912; 3 pp*; 50c.

Krecke, —. *Le procédé Stockfisch pour le creusement des puits;* [The Stockfisch cementation process in shaft sinking and its application at the Diergardt shaft, Prussia; translated from Glückauf, Apr.6,1912].—Annales d. Mines Belgiq., Vol. 17, No. 3; 1912; p. 773-790*; 90c.

Lechat, V.—*Le bassin houiller du Nord de la Belgique;* [Shaft sinking by the congelation process in the Nord coal field, Belgium].—Annales d. Mines, Belgiq., Vol. 17, No. 3; 1912; p. 741-752*; 90c.

Letcher, Owen.—*The Great Mines of Africa; Main Reef West.*—Mg. & Eng. World, Dec.7,1912; p. 1051; 1500 w*; 10c.

Littler, Wm.—*Method of Piling through Quicksands when Sinking.*—Sci. & Art of Mng., Oct.26, p. 142; 1000 w*; 35c.

Mackay-Heriot, E.—*Round vs. Rectangular Shafts.*—S. Afr. Mng. Jnl., May18,1912; p. 435; 800 w; 35c.

McCormac, T.—*Framing Shaft Sets.*—M. & S. P., July27,1912; p. 116; 500 w; 20c.

McCormac, T.—*Churn-Drilling in Shaft Sinking.*—M. & S. P., July13,1912; p. 45; 1000 w; 20c.

McCormac, T.—*Placing Shaft Sets.*—M. & S. P., Sept.28,1912; p. 405; 1400 w; 20c.

McDonald, P. B.—*Rolling Mill Mine, No. 2 Shaft; Negaunee, Mich.*—E. & M. J., June 22,1912; p. 1237; 1500 w*; 25c.

Mercer, H. T.—*Applications of Concrete to Underground Work;* [Shaft and drift supports in Michigan copper mines; read to Lake Superior Mng. Inst.].—Mining & Engg. World, Oct.26, p. 756; 1400 w*; 10c.

Metzgar, L. H.—*Shaft Sinking, Goldfield Merger Mines, Nevada.*—E. & M. J., Aug.31, 1912; p. 402; 500 w; 25c.

Nebelung, J.—*Die Verwendung von Sulzer-Hochdruck-Centrifugalpumpen in Grubenbetrieben;* [Use of Sulzer high-pressure centrifugal pumps in mining].—Bergbau, Aug.1,1912; p. 435; 1500 w*; 35c.

Norton, Wm.—*Extending a Shaft from Below;* [Alden, Pa.; read to Nanticoke Y. M. C. A. District Mng. Inst.].—Coal Age, Sept.21,1912; p. 391; 1500 w; 20c.

Pietsch, E.—*Ueber das Abteufen des Tagbau-Bremsschachtes in Trifail;* [Sinking the circular inclined shaft at the Trifail colliery, Austria].—Oestr. Zts. f. Berg- & H-wesen, Apr.13,1912; pp. 199-203; 2000 w*; 45c.

Piggott, F.—*Pit-Sinking Rules.*—Iron & Coal Trades Rev., Aug.30,1912; p. 307; 2300 w; 35c. Also in Coll'y Guardn., Sept. 6, p. 482; 3500 w; 35c.

Pütz, O.—*Das Spülversatzverfahren im In- und Ausland;* [Development and present status of hydraulic packing in Silesia and elsewhere].—Glückauf, Aug.24,1912; pp. 1357-1368*; Aug.31, pp. 1397-1406*; Sept.7, pp. 1441-1448; Sept.14, pp. 1485-92*; $1.50.

Rice, C. T.—*Copper Mining Practice at Lake Superior.*—See under Copper.

Royce, S.—*A Long Raise;* [950-ft. raise, 9x13 ft., Monarch mine, Murray, Idaho].—E. & M. J., July20,1912; p. 102; 400 w; 25c.

Springer, J. F.—*Difficulties in Sinking a Wet and Dry Shaft.*—Coal & Coke Op., Nov.21,1912; p. 325; 3000 w*; 20c.

Staley, J. J.—*Sinking and Securing 20-ft. Shaft Down to the Stone-Head.*—Sci. & Art of Mng., Oct.12, p. 119; 800 w*; 35c.

Stegemann, Prof. — *Die wichtigsten Schachtabteufverfahren im Vergleich miteinander;* [The more important processes of shaft sinking; comparisons with each other].—Techn. Blätter, June1,1912; p. 169; 4000 w; 35c.

Stewart, F. D.—*An Economical Sump Arrangement.*—Coal Age, Oct.19, p. 538; 400 w*; 20c.

Svedberg, J.—*Nagra meddelanden angände nyare schaktsänkningar i Skane, samt om därvid använda Arbetsmetoder;* [Progress in shaft sinking in Scania, and methods employed].—Tekn. Tidskrift, 1912; No. 19, p. 29-30; 75c.

Walbrecker, W.—*Studien und Versuche über das Gefrierverfahren;* [Studies and researches on the freezing process].—Essen dissertation; 1911; 21 pp.; $1; (thesis).

Weston, E. M.—*Record Shaft Sinking (Modder B) and Rectangular vs. Circular Shafts.*—Mng. & Engg. Rev., Sept.; p. 443; 1800 w; 35c.

Wittich, L. L.—*Shaft Upraising;* [Raise to surface from a drift by use of a swinging platform suspended through borehole, at Luenweg, Mo.].—Mines & Minerals, Oct., 1912; p. 159; 1000 w*; 35c.

"An Old Miner."—*Placing Shaft-Sets;* [Working upward in small shafts].—M. & S. P., Oct.26, p. 536; 500 w; 20c.

E. G.—*Die beim Schachtbau verwendeten Apparate zur Messung von Bohrlochabweichungen;* [Determining the deviation from the vertical in shaft sinking].—Kohl & Erz, Sept.30, p. 994; Oct.7, p. 1026; 3000 w*; 50c.

———. *Bucket Trolleys for Sinking Inclined Shafts;* [In Michigan copper mines].—E. & M. J., Aug.24,1912; p. 348; 1000 w*; 25c.

———. *Concrete Collars for Mine Shafts;* [at inclined shafts in Michigan

coper mines].—E. & M. J., Aug.10,1912; p. 255; 1200 w*; 25c.

———. *Concrete Shaft Collar at the Wolverine No. 5 Shaft, Mich.*—E. & M. J., Oct.5,1912; p. 637; 1000 w*; 25c.

———. *Easington Coal Co., Ltd., Durham;* [Visit by North of Engl. Inst. of Mng. & Mechl. Engrs.; describes chiefly shaft sinking (freezing) and equipment].—Coll'y Guardn., July26,1912; p. 175; 1000 w; 35c.

———. *Einiges über neue Schachtabteufenmethoden;* [New shaft-sinking methods; Kind-Chaudron process; cementing].—Wasser & Wagebau Zts., 1912, No. 4; p. 43; 500 w; 50c.

———. *Shaft Sinking on the Further East Rand.*—S. Afr. Mng. Jnl., Oct.19, p. 211; 1000 w; 35c.

———. *Shaft Sinking Reversed;* [Nowata shaft raise in Joplin district, Mo.].—M. & S. P., Aug.17,1912; p. 211; 1000 w; 20c.

———. *The Circular Shaft at the New Modderfontein, So. Africa.*—S. A. Mg. Jnl., Nov.9,1912; p. 300; 1200 w; 35c.

———. *The Freezing Process in the Campine Coal Field, Belgium.* — Coll'y Guardn., Sept.20,1912; p. 599; 500 w*; 35c.

———. *"The Story of a May Day";* [Trip to Wyoming Valley, Penn., coal mines; describes chiefly Woodward No. 3 and Loomis shafts and surface equipment].—Mines & Minerals, July,1912; p. 697; 2700 w*; 35c.

———. *Utilization of a Borehole in Shaft Sinking in Prussia.*—Mg. & Eng. World, Nov.16,1912; p. 898; 250 w; 10c.

Tunnels and Tunnelling

Barth, J.—*Zerfressene Zementrohre;* [Corrosion in the cement lining of the Schönebeck drainage tunnel].—Ton-Industrie, July 6,1912; p. 1081; 1400 w*; 35c.

Carmichael, N.—*Rapid Mine Tunneling in Arizona;* [Haulage adit, with 2 9000-ft. legs, for conveying ore from mine to mill, Ariz. Copper Co., Clifton].—E. & M. J., Aug.17,1912; p. 295; 4200 w*; 25c.

Davis, J. L.; E. A. May and A. W. Tidd.—*Methods of Alignment in Three Aqueduct Tunnels;* [Yonkers and Van Cortlandt pressure tunnels, N. Y., and Wachusetts tunnel, Mass.].—Engg. News, June20,1912; p. 1183; 4000 w*; 25c.

Davis, W. W.—*The Beacon Hill Subway Tunnel in Boston.*—Engg. Record, July13, 1912; p. 32; 4800 w*; 20c.

Friendly, O. N.—*Lining the Snake Creek Tunnel;* [near Park City, Utah].—E. & M. J., June 29, 1912; p. 1273; 4000 w*; 25c.

Hammott, W. C.—*Cost of Lowering Fielding Tunnel, Iron Mountain, Cal.;* [Abstract from Amer. Soc. of Civil Engrs., Proc., Vol. 38, p. 705].—Engg. & Contractg., June19,1912; p. 692; 500 w*; 20c.

Hermans, M.—*Einrichtungen zur Herstellung eines Wasserstollens in Süditalien;* [The 260-km. aqueduct tunnel of Aquatetta, S. Italy].—Glückauf, Aug.31,1912; p. 1406; 2000 w*; 50c.

Hirschberg, C. A.—*Electric-Air Drills in Japanese Tunnels.*—Compr. Air Mag., Sept., 1912; p. 6549; 800 w*; 25c.

Hirschberg, C. A.—*A Test of Electric-Air Drills in Tunnel Driving in Japan.*—Engg. News, July11,1912; p. 57; 400 w; 25c.

Hyde, L. M.—*Concrete Lined Aqueduct Tunnel Driven under Unusual Difficulties;* [Caving ground, water ingress, and inflammable gas for Santa Barbara tunnel in Santa Ynez Mtns., Cal.].—Engg. Record, Nov.9, p. 524; 4000 w*; 25c.

Japp, H.—*Subaqueous Tunnelling;* [about New York].—Engrs. Club of Phila.; Proc.; July,1912; p. 147-182*; 65c.

Kemp, J. F.—*Storm King Crossing of the Hudson River, by the New Catskill Aqueduct of N. Y. City.*—Amer. Jnl. of Sci., July,1912; pp. 1-11*; 65c.

Kohn, A. E.—*Cement in New York Water Project;* [Uses, chiefly in Catskill aqueduct tunnels].—Rock Products, June,1912; p. 21; 8000 w*; 30c.

Kommerell, O.—*Statistische Berechnung von Tunnelmauerwerk;* [Statistics and Formulas for Stresses, Strains, and Loads upon Tunnels and Tunnel Walls].—Berlin, 1912; 168 pp.; 10 plates; 144 figs.; $5 (book).

Launay, F.—*Method of Relining a French Canal Tunnel;* [16,000 ft. tunnel connecting Marne canal and Rhine river; from Ann. des Ponts & Chausées, May-June, 1912].—Engg. & Contractg., Oct.2,1912; p. 372; 500 w*; 20c.

Litz, V. — *Untersuchungen an Tunnel-Druckluftlokomotiven;* [Tests of various types of compressed-air locomotives in tunnel construction].—Glückauf, Nov.9, p. 1825-1833*; 45c.

Marchand, —. *L'électricité dans les travaux d'excavation;* [Electricity in tunnel driving; compressors, hoists, pumps, concrete mixers, locomotives, etc.].—Industrie Electriq., Sept.25, pp. 413-418*; 45c.

Powell, J. W.—*Mining a Thick Vertical Coal Seam;* [By rock tunnel; Coalmont, B. C.].—Coal Age, Aug.17,1912; p. 220; 1800 w*; 20c.

Reynolds, M. B.—*Method and Cost of Constructing Six Small Tunnels in Earth and Rock, Chicago Water Works.*—Engg. & Contractg., July3,1912; p. 9; 5000 w; 20c.

Ridgway, R.—*The Hudson River Crossing of the Catskill Aqueduct;* [Read to Engrs. Club of N. E. Penna.].—Scranton Board of Trade & Engg. Jnl., July,1912; p. 12; Aug., p. 6; 12,000 w*; 60c.

Saunders, W. L.—*Driving a Double Track Tunnel in Japan.*—Mining & Engg. World, Oct.26, p. 759; 1000 w*; 10c.

Schenk, A. O.—*Construction of the Severn Tunnel.*—S. Wales Inst. of Engrs., Proc. for Sept.,1912; pp. —; $2.

———. *Borsig Mammut Pumpen Anlage zur Entwässerung des Spreetunnels;* [Borsig Mammut pumping plant for draining the Spree tunnel of the Berlin subway].—Fördertechnik, July,1912; p. 155; 500 w*; 45c.

———. *Compressed-Air Tunnel Driven Without a Shield Through Wet Earth at Eastview, N. Y.*—Engg. Record, July20, 1912; p. 58, p. 69; 3600 w*; 25c.

———. *Construction Methods and Distribution of Costs in Constructing the Sixth Avenue Subway of the Hudson & Manhattan Ry., N. Y. City.*—Engg. & Contractg., Sept. 11,1912; p. 288; 4000 w*; 20c.

———. *Grouting Leaks in a Chicago River Tunnel.*—Engg. Record, Aug.3,1912; p. 126; 1500 w*; 20c.

———. *Lining Part of the Bonticou Grade Tunnel;* [17x13-ft. rock tunnel, Catskill aqueduct, N. Y.].—Engg. Record, June 22,1912; p. 685; 2500 w*; 25c.

———. *Methods of Constructing the Sand Patch Tunnel of the B. & O. R. R.*—

Engg. & Contractg., June26,1912; p. 720; 1500 w*; 20c.

———. *Method of Ventilating Railroad Tunnels;* [Weehawken, N. J., tunnel of West Shore R. R.].—Coal Age, Aug.31,1912; p. 289; 1000 w*; 20c.

———. *Seepage in Subaqueous Railroad Tunnels;* [and caulking methods].—Engg. Record, Aug.31,1912; p. 235; 2500 w; 25c.

———. *Turning Parallel Entries.*—Coal Age, Sept.21,1912; p. 405; 750 w*; 20c.

Stoping, Chamber Working, etc.

Babb, J. C.—*Abandoned Places in Mines;* [Necessity for preserving ventilation].—Coal Age, Aug.24,1912; p. 267; 500 w; 20c.

Baret, —. *Exploitation de la 8. couche au puits Chatelus 2. de la concession des mines de la Loire;* [Mining practice on the rapidly varying No. 8 coal seam at the Chatelus shaft, Loire colliery, France].—Soc. Minrl. St. Etienne, Bull.; June, 1912; pp. 561-585*; $1.15.

Bolesta-Malewski, —. *Abbau mit hohem Stoss unter Verwendung von Abbauförder-einrichtungen;* [Machine mining of thin coal seams using face-conveyors; Ruhr district, Germany].—Glückauf, Oct.26, p. 1749-1758*; Nov. 2, pp. —*; 12,000 w*; 75c.

Brockunier, S. H.—*Costs at the Erie Mine;* [Eureka district, Calif.; shrinkage stoping, etc.].—E. & M. J., Sept.7,1912; p. 455; 2500 w; 25c.

Butcher, E. W. R.—*Some Details of Mesabi Range Mining.*—E. & M. J., Oct.26, p. 781; 700 w*; 25c.

Cunningham, F. W.—*Pillar Drawing.*—Coal Mng. Inst. of Amer., Proc. for 1911; 1912; pp. 35-62*.

Davenport, L. D.—*Caving System in Chisholm District, Minn.*—E. & M. J., Sept.7, 1912; p. 437; Sept. 14, p. —; 4000 w*; 40c.

Davenport, L. D.—*Cutting a Station and Pocket in Ore.*—E. & M. J., Oct.19, p. 733; 800 w*; 25c.

Davenport, L. D.—*Hanging Chutes in Sub-Level Mining.*—E. & M. J., Aug.24, 1912; p. 349; 200 w*; 25c.

Davenport, L. D.—*Temporary Staging Suspensions;* [Hangers in "slice" rooms at Chisholm mine, Mesabi range, Minn.].—E. & M. J., July13,1912; p. 61; 150 w*; 25c.

Dixon, C.—*Improvements in the Caving System;* [Suggested economies for brown ores of Virginia].—Mines & Minerals, Aug., 1912; p. 56; 1700 w; 35c.

Fuller, J. T.—*Mining Methods at Kimberley.*—E. & M. J., Nov.9; p. 887; Nov. 16; p. —; 2000 w*; 40c.

Gerry, A. L.—*Iron Mining on the Mesabi Range, Minn.;* [Open-pit practice on gently dipping ore bed].—E. & M. J., Oct.12, p. 693; 3200 w*; 25c.

Hall, E. K.—*Costs in the Stopes;* [Cost in irregular ore bodies].—Australian Mng. Standd., June6,1912; p. 515; 750 w; 35c.

Harger, H. S.—*The Great Diamond Industry of South Africa;* [Open Mining and treatment at De Beers, Premier and other producers].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 251; 7000 w*; $1.

Hughes, W. T.—*Comparison of Barry and Stall Methods of Working Long Wall.*—Sci. & Art of Mng., Sept.28,1912; p. 88; 500 w*; 35c.

Hughes, W. T.—*Driving a Heading Rising 1:3; Ventilation, Timbering and Clearing.*—Sci. & Art of Mng., Oct.26, p. 137; 1000 w*; 35c.

Kennedy, T.—*Caving System in the Chisholm District, Mesabi Range, Minn.*—E. & M. J., Oct.26, p. 775; 1200 w*; 25c.

Lawrie, W. E.—*A Panel System of Coal Working;* [Read to mine managers of West Moreton district].—Queensland Mng. Jnl., Oct.,1912; p. 488; 3000 w*; 35c.

Littler, Wm.—*Method of Working Two 5-ft. Coal Seams, 10 ft. Apart and 1800 ft. Deep.*—Sci. & Art of Mng., Nov.9, p. 167; 500 w*; 35c.

Livingston, D. C.—*Mining Methods at Nacozari, Sonora, Mex.;* [Shrinkage stoping with ultimate waste filling supplanting room-and-pillar workings].—Amer. Inst. Mng. Engrs., Bull. 69; Sept.,1912; pp. 1009-1017*; $1.15.

Low, V. F. S.—*Mining Practices Compared;* [In world's leading metal mining centers].—Mng. Mag., July, p. 58; 2500 w; 45c.

Matteson, W. G.—*Mining Problems at Santa Gertrudis, Pachuca.*—E. & M. J., Sept.21,1912; p. 547; 4200 w*; 25c.

Mayor, S.—*Die maschinelle Kohlengewinnungsarbeit mit besonderer Berücksichtigung der Grubenverhältnisse in Süd-Wales;* [Machine Coal Mining, with Special Reference to Mining Conditions in South Wales; translated from the English by A. Holan].—Witkowitz; 1912; 88 pp; $2 (book).

McCale.—*Pillar Working in the Raniganj and Jharia Coal Fields.*—See Coal.

Muir, L. S.—*Short-Round Drilling;* [Advantages urged for "One man, one machine" mining on Rand stopes].—S. Afr. Mng. Jnl., Oct.19, p. 213; 2500 w; 35c.

Muller, J. V.—*Hints for Hand Stopers in Narrow Steep Reefs.*—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 203; 1000 w; $1.

Pickering, W. H. and B. H.—*Why Leave Shaft Pillars?* [Read to Instn. of Mng. Engrs., June, 1912].—Coll'y Guardn., June 7, p. 1132; June14, p. 1191; July26, p. 169; 10,000 w*; 65c. Also in Iron & Coal Trades Rev., June7, p. 909; June14, p. 947; 6000 w*; 50c. Also in Sci. & Art of Mng., June 22, p. 535; 1500 w*; 35c.

Powell, J. W.—*Mining a Thick Vertical Coal Seam;* [Coalmont, B. C.].—Coal Age, Aug.17,1912; p. 220; 1800 w*; 20c.

Rice, C. T.—*Copper Mining Practice at Lake Superior, IV;* [Drift stoping and raise stoping in amygdaloid mines].—E. & M. J., Aug.10,1912; p. 267; 4200 w*; 25c.

Rice, C. T.—*Mining Copper at Lake Superior;* [VI: Conglomerate mines; slopes, timber, rope haulage, fire protection].—E. & M. J., Aug.24,1912; p. 365; 5000 w*; 25c.

Rice, C. T.—*Mining Copper at Lake Superior;* [VII: Rock houses; haulage and hoisting, and pillar mining, in amygdaloid mines].—E. & M. J., Aug.31,1912; p. 405; 3000 w*; 25c.

Rice, C. T.—*Trimming Roofs of High Stopes;* [Practice in southeast Missouri lead district].—E. & M. J., Oct.5,1912; p. 629; 2000 w*; 25c.

Royce, S.—*A Long Raise;* [950-ft. raise, 9x13 ft., Monarch mine, Murray, Idaho].—E. & M. J., July20,1912; p. 102; 400 w; 25c.

Russell, H. Y.—*Cold Water in Drifting.*—E. & M. J., July20,1912; p. 107; 1500 w; 25c.

Russell, H. Y.—*Advantages of a Level Stope.*—E. & M. J., Aug.10,1912; p. 265; 1700 w; 25c.

Scholtze, G.—*Beitrag zum Abbau ste-*

hender Flötze; [The mining of vertical coal seams].—Kohle & Erz, Aug.5,1912; p. 806; 750 w; 35c.

Silliman, W. A.—*Big Pillar System of Mining;* [Lower Kittanning vein in Cambria county, Pa.].—Coal Mng. Inst. of Amer., Prof. for 1911; 1912; pp. 75-89*.

Stoltz, G. C.—*Development Methods at Mineville, N. Y.*—E. & M. J., Oct.26, p. 792; 2500 w*; 25c.

Toenges, A. L.—*Mining by Timbering and Filling;* [Methods at Homestake mine, Lead, S. Dak.].—Mines & Minerals, Aug., 1912; p. 36; 2500 w*; 35c.

Tonnesen, O.—*"Simplex" Stope Measuring Instrument.*—Cheml. Met. & Mng. Soc. of S. Afr., Jnl.; July,1912; p. 8; 1000 w*; 90c.

Virgin, R. Z.—*Working an Underlying Seam of Coal.*—Coal Age, Sept.7,1912; p. 331; 400 w*; 20c.

Ward, J. P.—*A Defence of Large Machines* [for local conditions in Rand stopes].—S. Afr. Mng. Jnl., Anniversary No., Sept., 1912; p. 53; 600 w*; $1.

Wilks, A.—*Stope Timbering.*—S. Afr. Mng. Jnl., July13,1912; p. 745; 500 w; 35c.

Wilson, J. B.—*Open Cut Mining;* [Principles and practice].— Australian Mng. Standd., Sept.19, 1912; p. 275; Sept.26, p. —; 4000 w; 50c.

Wilson, J. B.—*Caving System of Mining in America.*—E. & M. J., Aug.8,1912; p. 245; 2700 w; 25c.

Withington, J. A.—*Dangers in Attending Pillar Workings, and Precautions.*—Sci. & Art of Mng., Aug.3,1912; p. 621; 600 w; 35c.

———. *Costs of Cross-Cutting in Caved Ground;* [in a Nevada soft porphyry mine].—E. & M. J., Aug.3, 1912; p. 209; 250 w; 25c.

———. *Drift Round in Flat Sediments;* [Placing drift holes in s. e. Missouri lead mines in flat-lying dolomite].—E. & M. J., Sept.7,1912; p. 441; 500 w*; 25c.

———. *Glory Hole System of Mining, Dome Mine, Porcupine, Ont.*—E. & M. J., Oct.26, p. 781; 400 w*; 25c.

———. *High Cribbings to Support Roofs;* [Pillar mining, and disadvantages of caving, especially in Joplin district].—E. & M. J., July27,1912; p. 158; 1000 w; 25c.

———. *Mining in Frozen Ground;* [Practice in Klondike].—Mng. Mag., Sept.,1912; p. 176; 1000 w*; 35c.

———. *Mining a Pillar of Iron Ore;* [Mineville magnetites, N. Y.].—E. & M. J., Nov.9; p. 879; 1000 w*; 25c.

———. *Modder Deep Levels;* [Circular development].—S. Afr. Mng. Jnl., Oct.12, p. 173; 1000 w*; 35c.

———. *Notes on Stope Timbering.*—S. Afr. Mng. Jnl., June15,1912; p. 583; 500 w*; 35c.

———. *Rapid Driving at the St. Joseph Lead Mines, Mo.*—E. & M. J., Nov.9; p. 882; 500 w*; 25c.

———. *Systematic Hand Stoping on the Rand.*—S. Afr. Mng. Jnl., June8,1912; p. 545; 1200 w; 35c.

———. *Working Costs at 8000 ft.;* [Probable conditions on the Rand;.—S. Afr. Mng. Jnl., Oct.19, p. 207; 1400 w; 35c.

MINE AND MILL WATERS; PUMPS

Barath, J. — *Zerfressene Zementrohre;* [Corrosion of cement pipes and tunnel lining].—Ton Industrie Ztg., Aug.31,1912; p. 1415; 1000 w*; 35c.

Barbezat, —. *Kreiselpumpen und Ihr Vergleich mit entsprechenden Kolbenpumpen;* [Rotary pumps and their comparison with corresponding reciprocal pumps].—Zts. f. Turbinenwesen, June10,1912; 4 pp*; 75c.

Bartmann, Dr.—*Die Einleitung von Grubenwasser und anderen gewerblichen Abwässern in Wasserläufe nach dem neuen Entwurf eines preussischen Wassergesetzes;* [The discharge of mine and industrial waters into streams, according to the new draft of the Prussian water laws].—Deu. Bergwerks Ztg., June8,1912; p. 3; 4000 w; 35c.

Baumstark, F.—*Abdichtung von Schachtauskleidungen in Beton und Eisenbeton;* [Concrete and reinforced-concrete lining to render shafts waterproof].—Armierter Beton, No. 4, Vol. 5, 1912; pp. 151-154*; 75c.

Beckurts, H.—*Wissenschaftlichen Forschungen über die Natrium- und Magnesiumsalze in den Gewässern des Elb- und Weserstromgebietes;* [Review of investigations of the salt and magnesia content of the waters of the Elb and Weser river basins, as influenced by the potash works].—Kali, July15,1912; p. 337-341; 45c.

Blau, E.—*Hochdruck-Kreiselpumpen für Grubenwasserhaltungen und für Abteufzwecke;* [High-pressure centrifugal pumps for mine drainage and in shaft sinking; Sulzer types].—Montanist. Rundschau, Aug. 1,1912; p. 755; Aug.15, p. —; 4000 w*; 75c.

Bradley, F. A.—*Pumping and Water Power; A Guide to the Hydraulic Laws and Conditions Influencing Pumping Operations.*— London, 1912; 132 pp; $1.75 (book).

Carpenter, Chas. A.—*Centrifugal-Pump Specifications.*—Eng. Mag., Dec.,1912; p. 345; 1500 w; 35c.

Carter, C. E.—*Some Experiences in the Drainage of Mines;* [Water tunnels in Georges Creek coal field, W. Va.; read to W. Va. Coal Mng. Inst., June,1912].—Coal & Coke Op., July11,1912; p. 17; 3200 w; 20c.

Childs, J. N.—*Selecting Pumps to Unwater Anthracite Mines.*—Bl. Diam., Dec.7, 1912; p. 16; 1500 w*; 30c.

Corp, C. I.—*Apparatus for the Study of Pump Valve Action.*—Wisconsin Engr., Oct., 1912; p. 22-28*; 30c.

Davis, J. L.—*Impermeability Tests on Concrete.*—Engg. News, Nov.7, p. 866; 4000 w*; 25c.

Dietz, C. F.—*The Blasius Theory of a New Hydraulic Ram;* [Discusses Abraham's hydropulsator; from "Stevens Indicator"].—Engg. Rev., July15, p. 6; 5000 w*; 35c.

Dixon, S. G.—*Is Mine Water Germicidal?*—Coal Age, Aug.10,1912; p. 201; 750 w; 20c.

Dovey, C. C.—*Siphoning and Pumping Hot Water.*—Coal Age, Sept.14,1912; p. 374; 800 w*; 20c.

Fessel, G.—*Wasserhaltung für Ton-, Kohlen- und andere Gruben unter besonderer Berücksichtigung der Heberanlagen;* [Mine and pit drainage with special reference to the air lift for deep mines; Rotta collieries near Halle].—Kohle & Erz, Nov. 4, p. 1154; 2100 w*; 35c.

Fessel, G.—*Grubenentwässerung durch Heber;* [The siphon in mine drainage].—

Ton-Industrie Ztg., July11,1912; p. 1110; 1200 w*; 35c.

Gradenwitz, A.—*Turbo-Pumps in German Water Works.*—Power, Sept.10,1912; p. 372; 1800 w*; 15c.

Grittner, A.—*Waterproof Concrete;* [Use of coaltar oils, and of soap solutions].—Internatnl. Asso. f. Testing Materials, Proc.; Vol. 2, No. 8; 1912; 4 pp. 60c.

Gutmann, —. *Betrachtungen über bemerkenswerte neuere Konstruktion sowie Versuchsergebnisse von Zentrifugalpumpen;* [Notes on newer types of construction and on tests of centrifugal pumps].—Zts. f. Turbinenw., July20,1912; pp. 311-312*; 50c.

d'Haenens, —. *Pompes Rateau, Poste téléphonique;* [Rateau centrifugal pumps and pump-room telephones at Shafts 7 and 8, La Louvière colliery, Belgium].—Annales d. Mines Belgiq., Vol. 17, No. 3; 1912; p. 652; 500 w*; 90c.

Hanssen, C. T. A., and J. T. Towlson.—*The Stereophagus Pump.*—Engnrg., June 28,1912; p. 886; 2000 w*; 35c.

Havliczek, J.— *Betriebsergebnisse bei Zentrifugalpumpen und Turbokompressoren;* [Some practical results of centrifugal pumps and turbo-compressors; read to Allgm. Bergmannstag, Vienna, 1912; abstract].—Montanist. Rundschau, Sept.15, 1912; p. 948; 700 w; 50c.

Hermanns, H. —*Einrichtung zur Herstellung eines Wasserstollns in Süditalien;* [The 260-km. aqueduct tunnel of Aquatetta, S. Italy].—Glückauf, Aug.31,1912; p. 1406; 2000 w*; 50c.

Hibsch, —. *Das Auftreten gespannten Wassers von höherer Temperatur in den Schichten der obern Kreideformation Nordböhmens;* [Occurrence of hot underground waters under artesian pressure in the Upper Cretaceous strata of north Bohemia].—K. K. Geol. Reichsanst., Jahrb., Vol. 62, No. 2; 1912; pp. 311-331*; $2.

Höfer von Heimhalt, H.—*Grundwasser und Quellen; Hydrologie des Untergrundes;* [Ground Water and Springs, or Underground Hydrology].—Braunschweig, Germany; 1912; 146 pp; 51 figs; $1.50 (book).

Holland, W. H.—*Gasoline Engines in Mines;* [For pumping; fume elimination by removal along with the water].—Coal Age, Sept.21,1912; p. 405; 500 w; 20c.

Hughes, W. T.—*Advantages in Series of Lifts Instead of a Single Lift in Pumping Shafts.*—Sci. & Art of Mng., July20,1912; p. 597; 500 w*; 35c.

Hyde, L. M.—*Concrete-Lined Aqueduct Tunnel Driven under Unusual Difficulties;* [Caving ground, water ingress, and inflammable gas for Santa Barbara tunnel in Santa Ynez Mtns., Cal.].—Engg. Record, Nov.9, p. 524; 4000 w*; 25c.

Kummer, W.—*Die Inundation der Viktoria- und Habsburg-Schächte bei Brüx im Februar des Jahres,* 1909; [Study of the flooding of the Viktoria and Habsburg shafts by the overflow waters of the Kommern Lake district, Brüx, Bohemia, February, 1909].—Montanist. Rundschau, Junel, 1912; p. 521; 3500 w*; 45c.

Hutchinson, F.—*Renewing the Wearing Parts of Mine Pumps; Keeping Pit Work in Order.*—Sci. & Art of Mng., Aug.3,1912; p. 622; 1000 w*; 35c.

Jennings, J. T.—*Electricity Applied to Coal Mining.*—Coal Age, Dec.7,1912; p. 779; 2000 w; 20c.

Kirschner, O.—*Betrachtungen über einige im Kreiselpumpenbau häufig vorkommende Aufgaben;* [Some common characteristics of centrifugal pumps as interpreted from their curves].—Fördertechnik, Aug.,1912; p. 180; Sept., p. —; 2400 w*; 75c.

Kirchoffer, W. G.—*Calculations of Pump Slippage.*—Power, Oct.8,1912; p. 521; 1800 w*; 15c.

Klepal, O.—*Versuche mit Doppelfederventilen bei einer schnellgehenden Wasserpumpe;* [Some tests of double acting valves in high-speed reciprocating Borsig pumps].—Fördertechnik, Aug.,1912; p. 169; 5000 w*; 45c.

König, —. *Elektromotoren zum Betriebe von Abteufpumpen nebst Schaltapparaten;* [Electro-motors and switching attachments in sinking pumps, and their operation].—Elektrot. Anzgr., May23,1912; 3 pp*; 50c.

Kröner, —. *Die Kreiselpumpe im Betrieb;* [Centrifugal pumps in practice].—Fördertechnik, June,1912; 7 pp*; 45c.

Lane, A. C.—*Mine Waters;* [in Michigan copper country, and effect on ore deposition and concentration; from Mich. Geol. Survey Rep. f. 1909].—M. & S. P., Nov.9, p. 589; 2000 w; 20c.

Launay, F.—*Method of Relining a French Canal Tunnel;* [16,000 ft. tunnel connecting Marne canal and Rhine river; from Ann. d. Ponts & Chausées, May-June, 1912].—Engg. & Contractg., Oct.2,1912; p. 372; 500 w*; 20c.

Lof.—*Electric Mining Applications.*—See under Electricity.

Mager, H.—*Hydrologie Souterraine; les moyens de découvrir les eaux souterraines et de les utiliser;* [Methods of discovering and utilizing underground waters].—Paris, 1912; 776 pp.; 311 maps; $6 (book).

Mayer, K.—*Beiträge zur Theorie der Kolbenpumpen;* [The theory of reciprocating pumps].—Fördertechnik, July,1912; p. 148; Sept., p. —; 5000 w*; 75c.

Maxwell, H. B. and Fr. Zur Nedden.—*The Commercial Economy of Turbine Pumps;* [From S. Afr. Inst. of Engrs., Jnl.; June, 1912].—S. Afr. Mng. Jnl., May11, p. 397; 2000 w; 35c. Also in Iron & Coal Trades Rev., Aug.30, p. 303; Sept.6, p. 340; 12,000 w*; 50c.

Miller, F. S.—*Commercial Value of the Air Lift.*—Practl. Engr., Nov.15, p. 1142; 1600 w*; 20c.

Millington, W. E. W.—*Reliability in High-Lift Centrifugal Pumps;* [Paper read before Manch. Assn., Eng.].—Eng. Rev. (London), Nov.15,1912; p. 171; 5000 w* (first part); 35c. Iron & Coal Trades Rev., Nov.1, p. 701; 5000 w*; 35c. Mechl. World, Nov.1, p. 207; Nov.8, p. 220; 3500 w*; 50c.

Mrazec, L.—*Zur Frage der unterirdischen Gewässer in Rumänien;* [Problem of ground water in Roumanian oil fields].—Allgm. Oestr. Chemiker Ztg., July16,1912; p. 107; 1600 w; 45c.

Nebelung, J.—*Die Verwendung von Sulzer-Hochdruck-Centrifugalpumpen in Grubenbetrieben;* [Use of Sulzer high-pressure centrifugal pumps in mining].—Bergbau, Aug.1,1912; p. 435; 1500 w*; 35c.

Nelson, A.—*Advantages of the Plunger Pump over the Bucket Lift.*—Sci. & Art of Mng., Aug.3,1912; p. 619; 500 w; 35c.

Neumann, Fritz.—*Die Zentrifugalpumpen;* [Construction and operation of centrifugal pumps].—Berlin, 1912 (2d edition); 252 pp.; 228 figs.; $3.50 (book).

Neumann, Fr.—*Die Zentrifugalpumpen mit besonderer Berücksichtigung der Schaufelschnitte;* [Centrifugal pumps, with special reference to the blade section].—

Berlin, 1912 (2d edition); 252 pp; 228 figs; $3.50 (book).

Paulsmeier, A. C. and others.—*Field Measurements of Pump Discharge.*—Jnl. of El'y Power & Gas, Oct.5,1912; p. 300; 1000 w; 35c.

Phillips, S. U., and T. A. Ryan.—*Experiences in the Operation of Gasoline Engines in Mines;* [in pumps].—Coal Age, Oct.12, p. 503; 1000 w; 20c.

Preger, E.—*Der Hydropulsor;* [The hydropulsator]. — Glückauf, July13,1912; p. 1119; 2500 w*; 50c.

Reimer, C. L.—*Ueber Issleibs Verfahren zur Beseitigung der Endlaugen;* [The Issleib's process for getting rid of potash waste solutions by turning them into the soil].—Kali, Sept.15,1912; p. 445; 2000 w; 35c.

Richards, F.—*Compressed Air for Raising Water.*—Compr. Air Mag., July,1912; p. 6484; 1800 w; 25c.

Richter, F. L.—*Versuche an einer Stufenkolbenpumpe;* [Tests of a differential, stage, reciprocating pump].—Glückauf, Aug. 3,1912; pp. 1242-1252*; 45c.

Rogers, W. O.—*"Tom Hunter, Hoisting Engineer";* [Theory of mine pumping].—Power, Nov.5, p. 669; 1300 w*; 15c.

Russell, H. Y.—*Cold Water in Drifting.*—E. & M. J., July20,1912; p. 107; 1500 w; 15c.

Ryan, Geo. H.—*Home-Made Landing Cradle;* [For unwatering and working an old winze in Nevada].—Salt Lake Mng. Rev., July30,1912; p. 16; 500 w*; 25c.

Saueracker, —. *Ueber die Benutzung des Wassers für Grubenzwecke;* [German mining law on the utilization of waters for mining purposes].—Bergrechtl. Blätter, 1912, Nos. 3, 4; pp. 177-234; 75c.

Saville, C.—*River Cleaning and Regulation in Germany;* [Read to Amer. Public Health Asso.; abstract].—Engg. Record, Nov.9, p. 518; Nov.16, p. 549; 6000 w*; 35c.

Sherwood, M. W.—*Air Compressor Talks Without Mathematics;* [Compressed air in pumping and other uses].—Ideal Power, Aug., 1912; p. 119; 1000 w; 20c.

Simpson, C.—*Principle and Action of the Siphon.*—Sci. & Art of Mng., June22,1912; p. 542; 1000 w*; 35c.

Simpson, C.—*A 3-Throw Pump Lifting 5000 Gals. Hourly, 600 Ft.*—Sci. & Art of Mng., Sept.14,1912; p. 69; 600 w*; 35c.

Sohnlein, M. G.—*Self-Discharging Bailing Tank;* [400-gals. bailing tanks at Maestro shaft, Oruro, Bolivia].—E. & M. J., July20,1912; p. 110; 600 w*; 25c.

Steuer, —. *Bildung von Mineral- und Grundwasser in der Wetterau;* [Genesis of the mineral springs and ground waters of the Wetterau, Germany].—Jnl. f. Gasbeleuchtg., Oct.26, pp. 1054-1057; 50c.

Streeter, R. L.—*Power Machinery of the American Steel Industry;* [Pumps, air compressors and turbo-blowers, turbines and auxiliary power plant].—Engg. Mag., Nov., 1912; pp. 204-221*; 35c.

Thomas, R. D.—*Emergency Pump Installation.*—E. & M. J., Oct.5,1912; p. 635; 450 w; 25c.

Tillmans, J.—*Wasserreinigung und Abwasserbeseitigung;* [Water purification and treatment of industrial waste waters].—Halle, 1912; $2.50 (book).

Tidd, A. W.—*A Large, Heavy-Duty Timber Bulkhead.*—Coal Age, Aug.3,1912; p. 150; 800 w*; 20c.

Wagner, B. and E. Ewers.—*Allgemeines über die Versalzung der Flussläufe durch Abwässer aus Kalifabriken und Kalischächten;* [General notes on the salinification of streams by the waste waters of potash mines and works; read to Verbd. öffentl. Chemiker Deutschl.].—Chemiker Ztg., Oct.29, p. 1262; 1800 w; 35c.

Wenzel, —. *Die elektrisch angetriebene Turbopumpe der Zeche ver. Pörtingssiepen zu Kupferdreh;* [The electric turbo-pumps at the Pörtingsspiel mine, Germany].—Turbine, Oct.5, pp. 12-14; 50c.

Whitwell, C. B.—*Unwatering a Mine under Difficulties;* [in Yuba county, Cal.].—M. & S. P., June29,1912; p. 896; 800 w; 20c.

Wig, R. J., and P. H. Bates.—*Tests of the Absorptive and Permeable Properties of Portland Cement Mortars and Concretes;* and *Tests of Damp-Proofing and Waterproofing Compounds and Materials.*—U. S. Bur. of Standards, Technologic Paper No. 3; 1912; 127 pp.; 50c.

Wilson, H. M.—*Coal Washing and Pollution of Streams.*—Sanitary Record, Vol 50, 1912; p. 131; 50c.

Wilson, H. M.—*Pollution of Streams By, and Re-Use of, Coal Washery Water;* [Read to Roy. Sanitary Inst., York].—Iron & Coal Trades Rev., Aug.2,1912; p. 160; 1200 w; 35c.

Worcester, S. A.—*Bailer for a Winze Hoist;* [800-gals. bailer, Camp Bird mine].—E. & M. J., July27,1912; p. 156; 400 w*; 25c.

———. *A New Departure in Centrifugal Pumps;* [Rees Roturbo impeller].—Practl. Engr., Sept.15,1912; p. 956è, 1800 w*; 25c.

———. *An Old Mine Pump;* [50 years old, in Barnum No. 2 mine, Pittston, Penn.].—Power, July16,1912; p. 76; 350 w*; 15c.

———. *Air-Lift Wells at St. Paul, Minn.*—Practl. Engr., Sept.15,1912; p. 940; 1200 w*; 25c.

———. *Borsig Mammut Pumpen Anlage zur Entwässerung des Spreetunnels;* [Borsig Mammut pumping plant for draining the Spree tunnel of the Berlin subway].—Fördertechnik, July,1912; p. 155; 500 w*; 45c.

———. *Die Revierwasserlaufsanstalt zu Freiberg;* [Law of July 3, 1912, controlling the use of stream waters for mining and other industrial purposes in the Freiberg district, Saxony].—Zts. f. Bergrecht, Vol. 53, Part 4, 1912; pp. 478-501; 75c.

———. *Die Verschuldenfrage bei der Ableitung von Grubenwässern in öffentliche Flüsse;* [The damage-liability problem for the discharge of mine waters into public streams; according to German laws].—Deu. Bergwerks Ztg., June8,1912; section 4, page 1; 1200 w; 35c.

———. *Drilling and Pumping by Electricity;* [Midway oil field, Calif.].—Oil Age, Oct.18, p. 5; 1000 w; 20c.

———. *Flooding of Superba Mine;* [Fatal results of heavy rains near Unionport, Pa.].—Mines & Minerals, Sept.,1912; p. 69; 2100 w*; 35c.

———. *Grouting Leaks in a Chicago River Tunnel.*—Engg. Record, Aug.3,1912; p. 126; 1500 w*; 20c.

———. *Handling Mine Water;* [New Deane steam pump with herring-bone gears].—Coal Age, Aug.17,1912; p. 219; 750 w*; 20c.

———. *Lowering Ground-Water Level by a Deep Drainage Canal;* [Conditions at Cripple Creek, Colo.].—Engg. Record, Aug. 17; p. 176; 800 w; 20c.

———. *Notes on Methods of Securing Impermeable Concrete for Marine Works.*—Engg. & Contractg., Aug.21,1912; p. 201; 1800 w; 20c.

———. *New Electric Mine Pump;* [Deane pump].—Mines & Minerals, Nov., p. 231; 750 w*; 35c.

———. *Protection of Mine Pumps from Corrosion;* [Discussion].—Coal Mng. Inst. of Amer., Proc. for 1911; 1912; pp. 227-230.

———. *Protective Coating for Mine Piping.*—Mining & Engg. World, July27, 1912; p. 168; 500 w; 10c.

———. *Roturbo Pumps at Allerton Bywater Collieries;* [Rees type].—Iron & Coal Trades Rev., June14,1912; p. 958; 800 w*; 35c.

———. *Seepage in Subaqueous Railroad Tunnels;* [and caulking methods].—Engg. Record, Aug.31,1912; p. 235; 2500 w; 25c.

———. *The Ravensbourne Pump.*—Coll'y Guardn., Aug.16,1912; p. 333; 1000 w*; 35c.

———. *Unwatering the Plymouth Shaft.*—M. & S. P., Oct.19, p. 504; 500 w; 20c.

———. *Water Economy and Electric Pumping;* [Discusses relative economy of airlift pump].—El. Rev. (London), June14, 1912; p. 951; 1000 w*; 35c.

———. *Zinkrohre für Wasserleitungen;* [Zinc pipes for conveying mine and other waters].—Kohle & Erz, Oct.28,1912; p. 1138; 1200 w; 35c.

MINE GASES; VENTILATION

Arlt, W.—*Untersuchung über Wetterführung mittels Lutten;* [Researches on mine ventilation by means of pipes].—Ver. Deu. Ingr., Zts.; Sept.28, pp. 1588-1592*; Oct.12, pp. 1665-1668*; 95c. Abstract in Kohle & Erz, Oct.21, p. 1111; 700 w; 35c.

Babb, J. C.—***Abandoned Places in Mines;*** **[Necessity for preserving ventilation].—Coal Age, Aug.24,1912; p. 267; 500 w; 20c. 20c.**

Bansen, H.—*Die Systematik der Wetterverteilung;* [Textbook on ventilation and air parting in coal mining].—Kattowitz, 1911; pp. —; 9 plates; $1.50; (book).

Bateman, S.—*The Compulsory Requirement of Thermometer, Barometer and Hygrometer at Collieries.*—Sci. & Art of Mng., Aug.17,1912; p. 18; 1200 w; 35c.

Beard, J. T.—*Points of Interest in Mine Ventilation;* **[Read to W. Va. Coal Mng. Inst.].—Coal Trade Bull., Sept.2,1912; p.** 36; 3000 w; 25c. Also in Mg. Sci., Dec.5, 1912; p. 358; 2500 w; 20c.

Beardsley, S.—*Relative Sizes of Main Intake and Return Airways.*—Sci. & Art of Mng., June22,1912; p. 543; 1000 w; 35c.

Beattie, J. M.—*The Effect Produced on the Lungs by the Inhalation of Coal Dust and Other Dusts;* [From report of Explosions in Mines committee (British)].—Iron & Coal Trades Rev., Aug.2,1912; p. 155; 3000 w*; 35c.

Berthelson, W.—*The Dust Problem;* [on the Rand].—S. Afr. Mng. Jnl., Oct.12, p. 187; 600 w; 35c.

Cartlidge, O.—*Why Is a Stopping;* [Design and mis-design of various stoppings in air ways].—Mines & Minerals, Nov., p. 190; 1300 w*; 35c.

Charlton, W.—*Modern Ventilating Machines;* [Read to S. Staff. & Warwicks. Inst. of Mng. Engrs., June 17, 1912].—Iron & Coal Trades Rev., June21; p. 989; 6000 w*; 35c. Also in Coll'y Guardn., July5, p. 11; 6000 w*; 35c.

Coster, A. V.—*Combustion Engines for Driving Mining Machinery;* [Direct drive for fans by gas-engines].—Cassier's Mag., July,1912; p. 23-33*; 35c.

Davenport, L. D.—*Canvas Ventilation Pipes.*—E. & M. J., Nov.30,1912; p. 1024; 500 w; 25c.

Davies, T.—*Proposed Ventilation System;* [To minimize spread of explosions, and to enable quick recovery of mine and men].—Coal Age, July13,1912; p. 48; 1500 w*; 20c.

Dean, S., and J. Ashworth.—*Humidity of Mine Air.*—Coal Age, Aug.10,1912; p. 197; 1000 w; 20c.

Dixon, H.—*Does Moisture Aid Exploding Methane?*—Coal Age, Aug.24,1912; p. 266; 700 w; 20c.

Dobbelstein, O.—*Versuche mit Druckluftstrahlapparaten und Ventilatoren zur Sonderbewetterung;* [Compressed-air ejectors and fans for special mine ventilation; comparative operating and cost tests of Körting and Altena ejectors, and Turbon, Elektra, Korfmann, and Frölich-Klüpfel fans].—Glückauf, Aug.10,1912; pp. 1277-1285*; 50c.

Gaskell, T., and T. Garbett.—*Effect of Changes in Atmospheric Pressure and Temperature on Mine Ventilation by Fans.*—Sci. & Art of Mng., Nov.9, p. 162; 1000 w; 35c.

Grundy, Jas.—*Criteria in Determining Quantity of Air Necessary for Mine Ventilation.*—Sci. & Art of Mng., June22,1912; p. 545; 1000 w; 35c.

Haigh, S. C.—*The Waddle Fan.*—Sci. & Art of Mng., Sept.14,1912; p. 72; 500 w*; 35c.

Haldane, J. S.—*Effects of Deficiency of Oxygen on the Light of a Safety Lamp;* [Read to S. Staff. & Warwickshire Inst. Mng. Engrs.; abstract].—Coll'y Guardn., Oct.25, p. 835; 2000 w; 35c. Also in Iron & Coal Trades Rev., Oct. 25, p. 672; 2000 w; 35c.

Hamilton, G. W.—*Ventilation of a Bituminous Coal Mine;* [From "Electric Journal"].—Coal & Coke Op., Nov.14, p. 305; 1200 w*; 25c.

Harbaugh, A. J.—*The Use of Concrete for Brattices.*—Coal Age, Aug.24,1912; p. 248; 500 w; 20c.

Hartill, B.—*Reducing Ventilation When Firing.*—Coal Age, Aug.24,1912; p. 266; 600 w; 20c.

Haas, F.—*Humidity of Mine Air.*—Coal Age, July27, p. 129; 400 w; 20c.

Henderson, Dr. Yandell.—*A Consideration of the Unknown Factors in the Ill Effects of Bad Ventilation;* [Paper presented to Int. Congress on Hygiene and Demography].—Eng. News, Nov.28,1912; 500 w; 26c.

Heym, W.—*Die Grubenventilation in dem Witwatersranddistrikt;* [Mine ventilation on the Rand].—Kali Erz & Kohlen, Sept. 15,1912; p. 915; 1600 w; 35c.

Heys, W.—*Precautions for Maintaining Ventilation at Collieries in Case of Accident.*—Sci. & Art of Mng., June22,1912; p. 551; 1500 w; 35c.

Hill, L.—*Health and Ventilation;* [Devitalizing heat rather than chemical impurity the real evil in impure air; presidential address, Physiological section, Brit. Asso. Adv. of Sci.; abstract].—Roy. Soc. of Arts, Jnl.; Sept.20,1912; p. 998; 2500 w;

35c. Also in Mining & Engg. World, Oct.19, p. 713; 2500 w; 10c.

Holland, W. H.—*Gasoline Engines in Mines;* [For pumping; fume elimination by removal along with the water].—Coal Age, Sept.21,1912; p. 405; 500 w; 20c.

Hughes, W. T.—*Which Should Be the Return in Ventilating a Heading by Air Pipes—the Pipes or the Heading?*—Sci. & Art of Mng., Aug.17,1912; p. 19; 1000 w*; 35c.

Hughes, W. T.—*Removing a Large Fall in a Return Air-Way.*—Sci. & Art of Mng., Oct. 1; p. 113; 500 w*; 35c.

Hutchinson, F.—*The Sirocco Fan.*—Sci. & Art of Mng., Aug.31,1912; p. 45; 500 w*; 35c.

Hutchinson, J. W., and E. C. Evans.—*Notes on the Analyses of Mine Air Conducted at the Lewis Merthyr Cons. Collieries, Ltd., Trehaford;* [Read to S. Wales Inst. of Engrs.].—Coll'y Guardn., July19, 1912; p. 117; 4800 w*; 35c.

Johnston, A. Mc. A.—*Note on Dust Determination by Filtration Through Sugar.* —Cheml. Met. & Mng. Soc. of S. Afr., Jnl; May,1912; p. 442; 500 w*; 90c.

Kimball, D. D.—*The Present Status of Ventilation;* [Paper presented to Int. Congress on Hygiene and Demography].—Eng. News, Nov.28,1912; p. 1912; p. 996; 7000 w; 25c.

King, Campbell.—*The Electrification of a Group of Small Collieries.* (Paper read before West of Scotland Br. Assn. Mg. Elec. Eng.).—Ir. & C. Tr. Rev., Nov.29, 1912; p. 861; 750 w; 35c.

Laschinger, E. J.—*New Apparatus for Sampling Air for Dust.*—Cheml. Met. & Mng. Soc. of S. Afr., Jnl: May,1912; p. 443; 2200 w*; 90c. Reprint in S. Afr. Mng. Jnl., June29, p. 653; 2700 w; 35c.

Lee, Prof. Frederic S.—*The Effects of Temperature and Humidity on Fatigue;* [Paper presented to Int. Congress on Hygiene and Demography.—Eng. News, Nov. 28,1912; 500 w; 25c.

Mawdsley, W. H.—*Neutralizing Blasting Fumes.*—E. & M. J., Nov.2, p. 832; 300 w; 25c.

MacGregor, H. S.—*The Campaign Against Phthisis;* [Ventilation and dust allaying at Simmer Deep mine, Rand].—S. Afr. Mng. Jnl., July6,1912; p. 694; 1000 w; 35c.

Mantel, H.—*Was der Bergmann von der Wetterführung wissen muss;* [What the miner should know about ventilation].—Kettwig, 1912; 176 pp.*; 75c. (book).

Marks, J. D., and Alley, Gerald.—*The* Colorado Fuel & Iron Co.'s Rockville Mine. —Coal Age, Nov.30,1912; p. 744; 2500 w*; 20c.

McCune, Rob.—*Value of the Co-Efficient of Friction in Mine Ventilation.*—Coal Age, Sept.28,1912; p. 435; 600 w; 20c.

Mitchell, T. E.—*The Mitchell Dust Catcher;* [Used on drills at Butte].—E. & M. J., July27,1912; p. 157; 250 w*; 25c.

Mottram, T. H.—*Portable Spray Tank for Use Underground;* [for laying dust, Pemberton colliery, Wigan; from report on Liverpool & N. Wales district for 1911].—Iron & Coal Trades Rev., July19,1912; p. 96; 200 w*; 35c.

Mowat, D. M.—*Facts and Theories Relating to Fans;* [Read to Mng. Inst. of Scotland].—Coll'y Guardn., Aug.16,1912; p. 329; 3000 w; tables; 35c. Also in Iron & Coal Trades Rev., Aug.16, p. 231; 3000 w*; 35c.

Nelson, A.—*Arrangements to Enable the Ventilation to Be Reversed if Desired.*—Sci. & Art of Mng., Aug.31,1912; p. 46; 1200 w*; 35c.

Nelson, A.—*The Proportions of Ventilating Current Pressure Used in Overcoming Friction and in Giving Velocity.*—Sci. & Art of Mng., July20,1912; p. 594; 750 w; 35c.

Phillips, W. R.—*How Would You Proceed to Report on the Adequacy or Otherwise of the Ventilation of a Mine?*—Sci. & Art of Mng., Oct.26, p. 139; 1000 w; 35c.

Powell, J. W.—*Booster and Tandem Fans.*—Coal Age, Aug.31,1912; p. 300; 1500 w; 20c.

Rhys, R. T.—*Reducing Ventilation When Firing.*—Coal Age, July13,1912; p. 57; 2200 w; 20c.

Rogers, J. W.—*Notes on Electrically Driven Fans for Mining Ventilation.*—Engg. Rev., Oct.15, p. 137; 1800 w; 35c.

Sauvage, —. *Antrieb von Grubenventilatoren durch Drehstrommotoren mit regelbarer Umlaufzahl;* [The driving of mine fans by alternating current motors of regulatable speed].—Glückauf, Oct.12, p. 1668-1672*; 45c.

Schoew, K. F.—*Humidity of Mine Air.*— Coal Age, July20,1912; p. 93; 750 w; 20c.

Schoew, K. F.—*Quality and Quantity of Mine Air;* [Read to W. Va. Coal Mng. Inst., June,1912].—Coal Trade Bull., July 15,1912; p. 30; 3200 w; 25c.

Simpson, C.—*Value and Limits of Application of Auxiliary Fans Underground.*— Sci. & Art of Mng., Oct.12, p. 115; 500 w; 35c.

Simpson, C.—*Effect of Large Air-Ways and Low Velocity.*—Sci. & Art of Mng., July20,1912; p. 591; 500 w; 35c.

Steel, A. A.—*Moistening Mine Ventilating Currents;* [Steam jets and sprays; avoidance of fog and dampness].—Mines & Minerals, Oct.,1912; p. 141; 3000 w*; 35c.

Stegmann, B.—*Die Wetterwirtschaft im Bergwerks Getriebe;* [Ventilation in mines]. —Leipzig, 1912; $2 (book).

Treat, C. H.—*Measurement of Air in Fan Work;* [Read to Amer. Soc. Mechl. Engrs.; abstract].—Engg. Rev., Oct.15, p. 146; 5000 w*; 35c.

Toochmon, G. J. R.—*Secondary Splitting.* —Coal Age, Nov.16, p. 693; 600 w*; 20c.

"Tyke?"—*How the Constant .00038 is Arrived at in the Formula Relating to the "Equivalent Orifice" in Mine Ventilation.*— Sci. & Art of Mng., Aug.3,1912; p. 606; 1000 w; 35c.

Verner, J.—*Significance of the Counter Current.*—Coal Age, Nov.16, p. 677; 2500 w*; 20c.

Verner, J., and R. D. Hall.—*Compression of Air Before an Explosion.*—Coal Age, June22,1912; p. 1224; 750 w; 20c.

Virgin, R. Z., J. Laing, and others.— *Should Mine Fans Be Reversible?;* [Open discussion].—Coal Age. Oct.19, p. 545; Oct. 26, p. 581; Nov.2, p. 615; 5500 w; 40c.

Winslow, C. E. A.—*The New Art of Ventilation;* [Paper presented to Int. Congress on Hygiene and Demography].—Eng. News, Nov.28,1912; p. 1000; 5500 w; 25c.

Wuthrich, G.—*Oerlikon 3-Phase Variable-Speed Cascade-Connected Motor Set Driving Mine Fans.*—Iron & Coal Trades Rev., Oct. 4, p. 557; 1200 w*; 45c.

Zederbohm, —. *Ventilatorantrieb mit Drehstrom Kaskadenmotor auf der Zeche Werne;* [Fan drive with alternating-current cascade motor at Werne colliery, Prussia]. —Glückauf, June15,1912; p. 949-955*; 50c.

———. *U. S. Bureau of Mines Type of Air Humidifier.*—Black Diamond, Oct.26, p. 19; 100 w*; 30c. Also in Coal & Coke Op., Oct.31, p. 284; 400 w*; 25c. Also in M. & S. P., Nov. 2, p. 569; 300 w*; 20c. Also in Mining & Engg. World, Nov.9, p. 852; 300 w*; 10c.

M. E.—*Mine Gases and Gas Testing; Water Vapor and the Hygrometer.*—Sci. & Art of Mng., Aug.17,1912; p. 4; 2000 w*; 35c.

N. Zealand Royal Commission on Mines. —*Report;* [on accident prevention, ventilation, underground sanitation, change and bath houses, miners' phthisis, and utilization of low-grade coals of Westport district].—Iron & Coal Trades Rev., May31, 1912; p. 871; June7, p. 922; 10,000 w; 50c.

———. *Fan Engine-Room Signals.*—Power, July30,1912; p. 143; 500 w*; 15c.

———. *Improving Underground Ventilation on the Rand.*—S. A. Mg. Jnl., Nov.2, 1912; p. 267; 500 w*; 25c.

———. *Method of Ventilating Railroad Tunnels;* [Weehawken, N. J., tunnel of West Shore R. R.].—Coal Age, Aug.31,1912; p. 289; 1000 w*; 20c.

———. *Nonsensical Obstructions in the Ventilation of Mines.*—Mining & Engg. World, Nov.2, p. 815; 750 w; 10c.

———. *Ozonair Ventilating System;* [In tunnel of Central London Ry.].—Coll'y Guardn., May24,1912; p. 1035; 1000 w; 30c.

———. *The Coal Mining Industry of Japan.*—Coal Age, Nov.23,1912; p. 718; 1500 w; 20c.

———. *The "Dandy" Ventilator;* [Auxiliary compressed-air fan].—Coll'y Guardn., Aug.2,1912; p. 226; 500 w*; 35c.

———. *The Groups and Ventilation;* [Improved fan facilities following Rand consolidations; present equipment].—S. Afr. Mng. Jnl., June8,1912; p. 543; 1200 w; 35c.

———. *The Ventilation of Rand Mines.* —S. Afr. Mng. Jnl., Anniversary No., Sept., 1912; p. 127; 1500 w*; $1.

———. *Trouble with an Electric Fan.*— Coal Age, Oct.5, p. 460; 500 w; 20c.

———. *Two German Sprinkling Devices.* —Coal Age, Oct.19, p. 552; 500 w*; 20c.

———. *Ventilatoren für Raumbelüftung;* [Ventilation of mine chambers by electric fans].—Kohle & Erz, Sept.30, p. 1002; 1000 w; 35c.

———. *Ventilation in Pitching Anthracite Seams.*—Coal Age, Aug.24,1912; p. 267; 400 w; 20c.

———. *Versuche über die Zweckmässigkeit blasender oder saugender Luttenbewetterung bei Rettungsarbeiten;* [Tests of the relative usefulness of blowing vs. exhaust air-pipe ventilation in mine rescue work].—Zts. f. Berg-, H.-, & Salinenw., Vol. 60, No. 2; 1912; p. 233; 3000 w*; 90c.

———. *Untersuchung eines doppelt saugenden Grubenventilators, Bauart Hohenzollern, auf der Zeche Graf Bismarck;* [Tests of a double suction Hohenzollern mine fan at the Bismarck colliery; by Dortmund Boiler Inspectors' Asso.].—Glückauf, July20,1912; pp. 1160-1162*; 45c.

Firedamp; Coal Dust

See also under "Accidents"; also under "Sanitation; Safety; Rescue."

Butterwood, J.—*Estimating Small Percentages of Firedamp;* [Clowes, Stokes, Cunynghame - Cadman, Briggs, Beard-Mackie, Garforth lamp devices].—Mng. Engg., Aug.,1912; p. 133; 2000 w*; 35c.

Hahn, O. H.—*Refraction of Light in Firedamp;* [Haber-Löwe interferometer for detecting methane in air mixtures down to 1/100th of 1%].—Coal Age, July27,1912; p. 122; 1000 w*; 20c.

Haldane, J. S.—*The New Haldane Portable Apparatus for Firedamp Estimations.* —Coll'y Guardn., Sept.27,1912; p. 636; 1200 w*; 35c.

Harger, J.—*Relative Inflammability of Coal Dusts.*—Iron & Coal Trades Rev., Oct. 25, p. 673; 700 w; 35c.

Lomax, J.—*Microscopical Investigation of Coal and Coal Dust.*—Coll'y Guardn., June21,1912; p. 1240; 1200 w; 35c.

Matthews, T. J.—*The Production of Coal-dust in Mines;* [Reviews the various means of producing dust underground].—Mng. Engg., Oct.,1912; p. 182; 800 w; 35c.

Nelson, A.—*Nature and Formation of Coal Dust.*—Sci. & Art of Mng., July20, 1912; p. 593; 1000 w; 35c.

Oliver, Sir Thomas.—*Treatment of Dust in Coal Mines;* [Read to Internatnl. Congr. of Hygiene, Washington; abstract].—Sci. & Art of Mng., Oct.12, p. 104; 600 w; 35c.

Simpson, C.—*The Various Flame Caps on the Davy Lamp for Percentages of From 1 to 6% of Gas.*—Sci. & Art of Mng., Aug.31, 1912; p. 43; 500 w*; 35c.

Verner, J.—*How a Dust Explosion Sucks in Air.*—Coal Age, Oct.26, p. 568; 2100 w*; 20c.

Verner, J.—*Conditions Favoring Dust Explosions.*—Coal Age, Oct.12, p. 488; 2400 w; 20c.

Williams, Edw.—*Testing for Gas;* [Lecture before N. Wales Mng. Officials' Asso.]. —Sci. & Art of Mng., Aug.31,1912; p. 33; 1800 w; 35c.

Explosions - in - Mines Committee. — *The New Coaldust Experiments; Second Report;* [Abstract of British Home Office report].— Iron & Coal Trades Rev., Oct.4, p. 546; 3500 w*; 45c.

"M. E."—*Testing for Gas, a Popular Fallacy;* [Simple detection of 2½ and 1¼% of gas].—Coll'y Guardn., Sept.6,1912; p. 486; 800 w*; 35c.

"Tyke."—*Methods of Detection of Inflammable Gas.*—Sci. & Art of Mng., Sept.14, 1912; p. 50; 2100 w; 35c.

———. *An Improved Apparatus for the Examination of Flame Caps;* [New Baird-Tatlock instruction equipment].— Coll'y Guardn., Sept.27, p. 635; 1600 w*; 35c.

———. *Bläser und Gasausbrüche in Steinkohlenbergwerken;* [Air blasts and gas outbursts in coal mines].—Kali, Erz & Kohle, Sept.25,1912; p. 959; 1200 w; 35c.

———. *Can 1½% of Firedamp be Detected on a Flame of a Marsaut or Mueseler Safety Lamp.*—Sci. & Art of Mng., Aug. 17,1912; p. 2; 1500 w; 35c.

———. *Humidifying Mine Air to Avoid Explosion.*—Black Diamond, Oct.12, p. 15; 3500 w; 30c.

———. *Portable Apparatus for Routine Firedamp Estimations.*—Iron & Coal Trades Rev., Sept.13,1912; p. 377; 1000 w*; 35c.

———. *Second Report of the Explosions-in-Mines Committee;* [Editorial discussion of coal dust formation and its oxidation and distillation].—Coll'y Guardn., Oct.4, p. 695; 1500 w; 35c.

———. *The Meteorology of Mine Explosions.*—Iron & Coal Trades Rev., Aug.2, 1912; p. 173; 1200 w; 35c.

———. *Variation of Opinion as to Methods of Expelling Gases from Coal Mines.*—Coal & Coke Op., Nov.7, p. 290; 2100 w; 25c.

Mine and Deep Temperatures

Adams, G. F.—*Conservation and Future Trend of Coal-Mining in India;* [Discusses among other things deep shafts, deep mining, and temperatures at depth; presidential address].—Mng. & Geol. Inst. of India; Trans; Vol. 7, No. 1; 1912; pp. 17-41; $1.

Dietz, Dr. — *Ueber die Bekämpfung höherer Temperaturen im Kalibergbau;* [The treatment of higher temperatures in German potash mines].—Kali, Oct.15, p. 501-512; 45c.

Höfer, H. von.—*Temperature in Oil Regions.*—Economic Geol'y, Sept.,1912; pp. 536-541; 65c.

Locke, Aug.—*The Abnormal Temperatures of the Comstock Lode, Nev.*—Economic Geol'y, Sept.,1912; p. 583-587*; 65c.

Michael, R.—*Die Temperaturmessungen im Tiefbohrloch Czuchow;* [Temperature measurements in the world's deepest borehole at Czuchow, Silesia; from Kgl. Preuss. Geol. L-A., Jahrb. Vol. 31, Part 2, No. 1]. —Kohle & Erz, Oct.21, p. 1106; 2200 w*; 35c.

Tyke.—*Temperature in Deep Mines.*—Sci. & Art of Mng., Nov.9, p. 148; 2000 w; 35c.

———. *Temperatures at St. John del Rey, Brazil.*—Mng. Mag., July.1912; p. 66; 300 w*; 45c.

———. *The Question of Underground Temperatures;* [Comparison of Rand and Australian conditions].—S. Afr. Mng. Jnl., July13,1912; p. 736; 1200 w; 35c.

———. *Underground Temperatures and Working Conditions;* [Extracts from report of N. Zealand commission].—Compr. Air Mag., Oct.,1912; p. 6595; 1000 w; 25c.

SUPPORTS: PROPS, PILLARS, STOWING

Bürklein, A.—*Das neue Holzimprägnierungs-Verfahren; System Hasselmann;* [New experiments in the impregnation of wood, Hasselmann system].—Bergbau, Nov. 7,1912; p. 631; 3500 w; 50c.

Carpenter, F. G.—*Creep in the Panama Canal.*—Mines & Minerals, Aug.,1912; p. 39; 1800 w*; 35c.

Edwards, Frank R.—*Steel Timbering in an Inclined Shaft.*—E. & M. J., Nov.30, 1912; p. 1023; 1000 w*; 25c.

Friz, W.—*Gebirgsdruck auf die Grubenzimmerung;* [Computation of rock pressure on mine chambers].—Berg- & Hüttenm. Rundschau, Oct.5, p. 1; 3000 w*; 45c.

Griffith, Wm.—*No Likelihood of Municipal Fires Following Surface Caving;* [in Scranton district, Pa.].—Black Diamond, Sept.21, p. 22; 1000 w*; 35c.

Hall, R. D.—*Action of the Roof.*—Coal Mng. Inst. of Amer., Proc. for 1911; 1912; pp. 63-75*.

Hoard, H. and F. L. Sizer.—*Air Blasts or Earth Movements in the Coeur d'Alenes.*—Mines & Minerals, Sept.,1912; p. 87; 1100 w; 35c.

Hornaday, W. D.—*The Santa Maria Graphite Mines, Mexico.*—Mg. & Eng. World, Dec.7,1912; p. 1041; 3000 w*; 10c.

Hughes, W. T.—*Removing a Large Fall in a Return Air-Way.*—Sci. & Art of Mng., Oct.12, p. 113; 500 w*; 35c.

Kommerrell, O.—*Statistische Berechnung von Tunnelmauerwerk;* [Statistics and Formulas for Stresses, Strains, and Loads upon Tunnels and Tunnel Walls].—Berlin, 1912; 168 pp.; 10 plates; 144 figs.; $5 (book).

Kotze, R. N.—*Air Blasts and Subsidences;* [on the Rand].—E. & M. J., Sept. 21,1912; p. 556; 700 w*; 25c.

Kotze, R. N.—*Mine Subsidences on the Rand;* [Causes, consequences, prevention; earth tremors; presidential address, S. Afr. Inst. of Engrs.].—S. Afr. Mng. Jnl., June22, 1912; p. 623; 2000 w; 35c.

Johnson, Tom.—*So-Called Air Blasts and Roof Pressure.*—Chemi. Met. & Mng. Soc. of S. Afr., Jnl.; Aug.,1912; p. 37; 1200 w; 90c.

MacDonald, D. F.—***Slides in the Culebra Cut at Panama.***—**Engg. Record, Aug.31, 1912; p. 228; 4000 w*; 25c.**

Morin, —. *Quelpues effets de pression de terrains dans les exploitations houillères;* [Some effects of rock pressure in coal mining].—Soc. de l'Ind. Minrl. St. Etienne, Bull., Sept.,1912; pp. 241-279*; $1.15.

Rice, Claude T.—*Square-Set Timbering; Importance and Evolution* (first article).—Mg. & Eng. World, Dec.14,1912; p. 1079; 4500 w*; Dec.21,1912; p. 1133; 6500 w; 20c.

Rice, Geo. S.—*Accidents from Falls of Roof and Coal.*—U. S. Bur. Mines, Miners' Circular No. 9; 16 pp.*; 20c.
Abstract in Coal & Coke Op., Nov.14, p. 310; 1800 w; 25c.

Sawyer, R. E.—*Sand-Filling on the Rand.* —S. A. Mg. Jnl., Nov.2,1912; p. 271; 1500 w; 35c.

Sexton, Frederic H., and Hodge, Charles A.—*Tests on Specimens of Nova Scotian Mine Timber.*—Jnl. Mg. Soc., N. S., Vol. XVII, 1912; p. 70; 11 p.*; 50c.

Snyder, T. E.—*Insect Damage to Mine Props and Its Prevention* (U. S. Bureau of Entomology, Circular 156; abstract).—Mg. & Eng. World, Dec.7,1912; p. 1042; 1200 w; 10c.

Springer, J. F.—*Difficulties in Sinking a Wet and a Dry Shaft.*—Coal & Coke Op., Nov.21,1912; p. 325; 3000 w*; 20c.

Stirling, J. T., and J. Cadman.—*The Bellevue Explosions, Alberta, Canada;* [Caused by sparks from falls of roof; read to Instn. of Mng. Engrs., Birmingham, Engl., Sept.,1912].—Coll'y Guardn., Sept.13, 1912; p. 534; 5000 w; 35c. Also in Iron & Coal Trades Rev., Sept.13, p. 378; 5000 w; 35c.

Williams, Wm.—*Lamp-Room Fittings.*—Sci. & Art of Mng., Aug.3,1912; p. 618; 600 w*; 35c.

Willing, H.—*Die Gebirgsschläge in Flöz Neuflöz in Bezirke des Bergrevieres Dortmund I und die Massnahmen zu Ihrer Verhütung;* [Falls, creep, and underground pressure breaks in the Neufföz coal seam, Dortmund I district; and precautionary measures].—Techn. Blätter, July13,1912; p. 217; July20, p. —; 5000 w*; 50c.

Zunino, Dr.—*L'acétylène dans les mines de Sicile et de Sardaigne;* [Acetylene lamps in the mines of Sicily and Sardinia; Carusi, Picconieri and Vagonieri types].—Jnl. du Four Electriq., Aug.1,1912; p. 354; 500 w; 35c.

———. *Coal Mine Supports in Germany.* (Zeitschrift für das Berg-, Hutten- u. Salinenwesen; abstract).—M. & M., Dec., 1912; p. 240; 2000 w*; 35c.

———. *How Can the Number of Accidents in Mines from Falls be Reduced?* [Discussion].—Coal Mng. Inst. of Amer., Proc. for 1911; 1912; pp. 213-224.

———. *Le Remblayage Hydraulique aux Mines de Descazeville;* [Hydraulic filling at the Descazeville mines].—Revue Industrielle, Nov.16,1912; p. 9; 2300 w; 25 cts.

———. *So-Called Air Blasts on the Witwatersrand;* [Results, rather than cause, of rock displacements and subsidence].—Mining & Engg. World, Aug.10,1912; p. 236; 1200 w; 10c.

———. *Mine Subsidences on the Rand.* [From official report for 1911].—S. Afr. Mng. Jnl., Oct.5, p. 143; 1800 w; 35c.

———. *The Extent and Volume of Earth Slides at Culebra Cut, Panama Canal, and the Remedy Being Employed.*—Engg. & Contractg., Oct.2,1912; p. 374; 1200 w*; 20c.

Pillars

Cunningham, F. W.—*Pillar Drawing.*—Coal Mng. Inst. of Amer., Proc. for 1911; 1912; pp. 35-62*.

Herbst, Prof.—*Der Schachtsicherheitspfeiler im Steinkohlenbergbau und die Möglichkeit seines Abbaues;* [The shaft safety pillars in coal mining, and possibilities of their extraction].—Techn. Blätter, July6, 1912; p. 209; 3500 w; 35c.

Love, R. G.—*Estimating the Strength of Pillars.*—Coal Age, Nov.16, p. 676; 600 w; 20c.

McCale, C. H.—*Pillar Working in the Raniganj and Jharia Coal-Fields.*—Mng. & Geol. Inst. of India, Trans; Vol. 7, No. 1; 1912; pp. 42-69*; $1.

Nelson, A.—*Pillar Removal in a 9-ft. Seam Liable to Spontaneous Combustion.*—Sci. & Art of Mng., July6,1912; p. 570; 750 w*; 35c.

Nelson, A.—*Shaft Depth and Seam Inclination as Affecting Size of Shaft Pillars.*—Sci. & Art of Mng., June22,1912; p. 547; 1000 w*; 35c.

Northover, J.—*Drawing Room Pillars.*—Coal Age, July6,1912; p. 17; 500 w; 20c.

Pickering, W. H., and B. H.—*Why Leave Shaft Pillars?* [Read to Instn. of Mng. Engrs., June, 1912].—Coll'y Guardn., June 7,1912; p. 1132; 3000 w*; 30c. Also in Iron & Coal Trades Rev., June7, p. 909; 3000 w*; 30c.

Rice, C. T.—*Mining Copper at Lake Superior, VII:* [Rock houses; haulage and hoisting, and pillar mining; in amygdaloid mines].—E. & M. J., Aug.31,1912; p. 405; 3000 w*; 25c.

Silliman, W. A.—*Big Pillar System of Mining;* [Cambria county, Pa.].—Coal Mng. Inst. of Amer., Proc. for 1911; 1912; pp. 75-89*.

Withington, J. A.—*Dangers in Attending Pillar Workings, and Precautions.*—Sci. & Art of Mng., Aug.3,1912; p. 621; 600 w; 35c.

———. *Mining a Pillar of Iron Ore;* [Mineville magnetites, N. Y.]—E. & M. J., Nov.9, p. 879; 1000 w*; 25c.

Timbering and Props

Beaupain.—*Revêtement par étançons métalliques élastiques, système Nellen;* Cost data and tests of iron and steel timbering, by the elastic or Nellen system, in the Werister colliery, Belgium.—Annales d. Mines (Belgiq.), Vol. 17, No. 4, 1912; pp. 1133-1136* 65c.

Brown, W. L.—*Steel Sets in Inclined Shafts.*—M. & S. P., Sept.7,1912; p. 296; 1200 w*; 20c.

Calkins, F. E.—*Concrete Shaft Lining.*—M. & S. P., Nov.2, p. 568; 900 w; 20c.

Davenport, L. D.—*Shaft Timbering in Minnesota Iron Mines.*—E. & M. J., Nov.2, p. 830; 800 w*; 25c.

Davis, H. G.—*Antiseptic Treatment of Mine Timbers;* [Practice at D. L. & W R. R. Co. coal mines].—Mines & Minerals, July,1912; p. 706; 750 w; 35c.

Elwitz, —. *Verwendung von Eisenbeton beim Schachtbau an Stelle von Mauerwerk;* [Use of reinforced concrete to replace brickwork in shafts].—Glückauf, June8, 1912; p. 910; 1600 w*; 50c.

Eulefeld, —. *Das Grubenholz und der Grubenholz-Handel;* [Mine timber and the mine-timber trade in Germany; reprinted from Deu. Forst Ver., Mittlngn., 1912; No. 2-3].—Berlin, 1912; 52 pp*; 75c.

Fuller, J. T.—*Timbering a Small Shaft;* [Rapid method for small or temporary shafts].—Mines & Minerals, July,1912; p. 743; 1500 w*; 35c.

Hughes, W. T., and T. Garbett.—*Iron vs. Wood for Roof Supports.*—Sci. & Art. of Mng., Nov.9, p. 160; 1500 w*; 35c.

Hülsenbeck, Dr.—*Die neuesten Fortschritte auf dem Gebiete der Holzkonservierung;* [Newest advances in wood preservation].—Bergbau, June27,1912; p. 364; 600 w; 35c.

Laudau, M.—*Konservierung von Grubenhölzern;* [Some German tests on conservation of mine timbers].—Bergbau, Oct.3, p. 563; 1000 w*; 35c.

Lembcke, G. A.—*Storage Tank Agitator;* [for timber preservative].—Lumber World Rev., July10,1912; 500 w; 25c.

Malenkovicz, B.—*Zur Holzimprägnierung mit Chlorzink-Fluornatrium und Bellit;* [Preservation treatment of wood with zinc chloride—sodium fluoride and bellite].—Elektrotechnik & Masch Bau, Sept.15,1912; pp. 765-770; 35c.

Manktelow, Wm.—*Aczol; A New Preservative Material for Timber.*—El. Rev. (London), June28,1912; p. 1059; 1000 w; 35c.

Manktelow, W.—*Notes on Impregnation of Wooden Poles;* [Creosoting and comparison with other processes].—El. Rev. (London), Aug.30,1912; p. 335; 750 w; 35c.

Martin, J. P.—*The Design of Log Flumes;* [for transporting timber down from high tracts].—Engg. News, Nov.14, p. 908; 5000 w*; 25c.

McCormac, T.—*Framing Shaft Sets.*—M. & S. P., July27,1912; p. 116; 500 w; 20c.

McCormac, T.—*Placing Shaft Sets.*—M. & S. P., Sept.28,1912; p. 405; 1400 w; 20c.

Mercer, H. T.—*Applications of Concrete to Underground Work;* [Shaft and drift supports in Michigan copper mines; read to Lake Superior Mng. Inst.].—Mining & Engg. World, Oct.26, p. 756; 1400 w*; 10c.

Nowotny, R.—*Bisherige Erfolge des Sparverfahrens bei der Kreosotierung hölzerner Leitungsmasten in Oesterreich;* [Results to date of creosoting wooden poles in Austria electric transmission lines].—Elektrotechnik & MaschBau, June23,1912; p. 518; 2000 w; 35c.

Petritsch, E. F.—*Fortschritte auf dem Gebiete der Imprägnierungstechnik;* [Re-

cent progress in timber preservation].—Elektrotechnik & Maschinenbau, Nov.3, p. 913; Nov.10, p. —; 12,000 w*; 50c.

Rice, C. T.—*Mining Copper at Lake Superior;* [VI: Conglomerate mines; slopes, timber, rope haulage, fire protection].—E. & M. J., Aug.24,1912, p. 365; 5000 w*; 25c.

Rzehulka, A.—*Die Imprägnierung der Grubenhölzer zum Zwecke der Verlängerung ihrer Standdauer;* [Prolonging the life of mine timbers by impregnation].—Kohleninteressent, Sept.15,1912; p. 215; 3000 w; 35c.

Scholtze, G.—*Konservierung von Grubenholz;* [Some tests of impregnated mine timbers].—Kohle & Erz, Oct.14, p. 1045; 1500 w; 35c.

Sexton, F. H. and C. A. Hodge.—*Tests on Some Species of Nova Scotia Mine Timber;* [Fir and spruce].—Canadian Mng. Jnl., Oct.1,1912; p. 669; 1200 w*; 25c.

Snyder, T. E.—*Insect Damage to Mine Props and Methods of Preventing the Injury.*—U. S. Bur. of Entomology, Circular 156; 1912; 4 pp; 1500 w; 20c.

Abstract in Amer. Lumberman, Aug.3, 500 w; 50c. Also in St. Louis Lumberman, Aug.15; 500 w; 35c.

Srajn, V.—*Taking a Timber Down a Shaft;* [Computing maximum possible length].—Coal Age, Oct.19, p. 546; 600 w*; 20c.

Teesdale, C. H.—*The Absorption of Creosote by the Cell Walls of Wood.*—U. S. Forest Service, Circular No. 200; 1912; 7 pp; 20c.

Toenges, A. L.—*Mining by Timbering and Filling;* [Methods at Homestake mine, Lead, S. Dak.].—Mines & Minerals, Aug., 1912; p. 36; 2500 w*; 35c.

Walker, W.—*Use of Old Wire Ropes in Conjunction with Timber as Roof Supports.*—Iron & Coal Trades Rev., July19,1912; p. 91; 600 w; 35c.

Weiss, H. F.—*Tests to Determine the Commercial Value of Wood Preservatives.*—8th Internatnl. Congr. of Appl. Chem'y, Vol. 13, 1912; pp. 279-300.

Wilks, A.—*Stope Timbering.*—S. Afr. Mng. Jnl., July13,1912; p. 745; 500 w; 35c.

Winslow, C. P.—*Commercial Creosotes; With Special Reference to Protection of Wood from Decay.*—U. S. Forest Service, Circular No. 206; 1912; 38 pp*; 10c.

Woodbury, T. D.—*Free Use of Timber from Public Lands;* [Review of U. S. laws, amendments, and regulations applying to prospectors and mining men].—M. & S. P., June15,1912; p. 831; 2000 w; 20c.

"An Old Miner."—*Placing Shaft-Sets;* [Working upward in small shafts].—M. & S. P., Oct.26, p. 536; 500 w; 20c.

———. *Beton im Bergbau;* [Requirements of concrete for various mining purposes].—Baumaterialenmarkt, No. 26, 1912; pp. 687-688*; 50c.

———. *High Cribbings to Support Roofs;* [Pillar mining, and disadvantages of caving, especially in Joplin district].—E. & M. J., July27,1912; p. 158; 1000 w; 25c.

———. *Insect Injury to Mine Props, and Its Prevention;* [from U. S. Bur. of Entomology, Circular No. 156].—Amer. Lumberman, Aug.3,1912; 500 w; 50c. Also in St. Louis Lumberman, Aug.15, 500 w; 35c.

———. *Konservieren von Grubenholz;* [Development of mine-timber preservation in Germany].—Bitumen, Aug.1,1912; p. 231; 2000 w; 35c.

———. *Notes on Stope Timbering.*—S. Afr. Mng. Jnl., June15,1912; p. 583; 500 w*; 35c.

———. *Port Reading Creosoting Plant;* [of Central RR. of N. J.].—Ry. Age. Gazt., July19,1912; 4 pp.*; 25c.

———. *Posting a Drawslate;* [Approved method in Pennsylvania].—Coal Age, Aug. 24,1912; p. 258; 750 w*; 20c.

———. *Preservation of Mine Timbers;* [Abstracts of J. M. Nelson's paper before Coal Mng. Inst. of Amer., and E. W. Peters' U. S. Forest Service Bull. No. 107].—Mines & Minerals, Sept.,1912; p. 83; 2800 w*; 35c.

———. *Presse hydraulique pour cintrer les chaneaux de boisage des galéries de mines;* [Hydraulic press for bending roof timbers in mine galleries]. — Portef. Economiq. d. Machines, 1912; pp. 93-96*; 75c.

———. *Philip Deidesheimer and the Invention of the Square Set.*—Mining & Engg. World, Nov.9, p. 844; 1200 w; 10c.

———. *Taking 25-ft Steel Timbers Down a Shaft.*—Coal Age, Sept.7, 1912; p. 334; 600 w*; 20c.

———. *Tie Yard of Gt. Northern Ry. at Boston, England.*—Ry. & Engg. Rev., July 20,1912; 1425 w*; 25c.

———. *Timber Planting on Pit Banks and Waste Lands.*—Iron & Coal Trades Rev., Oct.11, p. 602; 1000 w; 35c.

———. *Truck for Lowering Timber.*—E. & M. J., July13,1912; p. 59; 250 w*; 25c.

Packing

Cooke, G. W.—*The Prevention of Gob Fires in Fiery Mines;* [Advocates hydraulic filling].—Mng. Jnl., Aug.,1912; p. 755; 400 w; 35c. Also in Iron & Coal Trades Rev., July26; p. 123; 400 w; 35c.

Doise, C. M.—*Le remblayage hydraulique au siège No. 3 des mines de Bruay;* [Hydraulic packing at Bruay Colliery No. 3, North France].—Soc. de l'Ind. Minrl. St. Etienne, Bull.; July, 1912; pp. 65-109*; $1.15.

German abstract in Kohleninteressent, Sept.15, p. 219; Oct.1, p. —; 3500 w; 50c.

Hall, E. K.—*Stope Filling, and Caving for Mullock.*—Mng. & Engg. Rev., May, 1912; 325; 1000 w*; 35c.

Keckstein, H.—*Die Rohrleitungen im Spühlversatzbetriebe;* [Piping and its selection, in hydraulic packing; read to Allgm. Bergmannstag, Vienna, Sept., 1912; abstract].—Montanist. Rundschau, Sept.15, 1912; p. 955; 750 w; 50c.

Pütz, O.—*Der Ursprung des Spülversatzes;* [The origin of sand filling].— Zentral Verbd. Bergbau Betriebsl. Oestr., Zts., June15,1912; pp. 353-358; 4000 w; 45c.

Rosenberger, A.—*Bedingungen für die Bewegung des Schlämmversatzes in den Rohrleitungen;* [Studies on the theoretic requirements for the movement of sand in pipes in stowing].—Zentral Verbd. Bergbau Betriebsl. Oestr.; Zts.; Sept.15,1912; p. 574; 6000 w*; 50c.

Sawyer, R. E.—*A System of Sand-filling used on the Rand;* [Initial killing of cyanide].—Instn. of Mng. & Met'gy, Bull. 97; Oct.10, 5 pp; 1500 w*; 90c. Reprinted in Mng. Sci., Oct.31, p. 279; 1500 w*; 20c.

Walker, W.—*Hydraulic Stowage at Dalzell & Broomside Colliery;* [From report of Scotland mines inspector for 1911].—Iron & Coal Trades Rev., July12,1912; p. 51; 1800 w; 35c. Also in Coll'y Guardn., July 19, p. 122; 1800 w; 35c.

———. *Der Massentransport in Spülversatzanlagen;* [Transporting and handling materials in sand-filling plants for mines]. —Kohle & Erz, Oct.14, p. 1070; 600 w*; 35c.

———. *Hydraulic Packing in German State Mines.*—Coll'y Guardn., Nov.1, p. 903; 500 w; tables; 35c.

———. *Om spülversatz;* [Hydraulic stowing].—Teknisk Ugeblad, No. 28, 1912; p. 363-364; 65c.

———. *Progress in Sand-Filling;* [on the Rand].—S. Afr. Mng. Jnl., Oct.12, p. 172; 900 w; 35c.

LIGHTING AND SIGNALLING

Arnold, R. R.—*The Arnold Carbide Candle.*—Mng. Sci., Aug.8,1912; p. 91; 1000 w*; 20c.

Ashworth, Jas.—*Inability to Test for Gas;* [Urges investigation of eye-sight of miners unable to perceive a cap].—Coal Age, June22,1912; p. 1215; 2100 w; 20c.

Beyling, —; and Hatzfeld.— *Die Durchblasesicherheit von Doppelkorblampen;* [Safety of double-gauzed mine safety-lamps against flame emission; tests at the mine owners' experiment station at Derne and the state experiment station at Neunkirchen, Saar district, Prussia].—Glückauf, June 1,1912; p. 857-866*; 50c.

Brunnenbusch, —. *Schlagwettersichere Glühlichtarmatur;* [Flame-proof electric lamp of Schanzenbach & Co.].—Glückauf, June1,1912; p. 879; 500 w*; 50c.

Butterwood, J.—*Estimating Small Percentages of Firedamp;* [Clowes, Stokes, Cunynghame-Cadman, Briggs, Beard-Mackie, Garforth lamp devices].—Mng. Engg., Aug.,1912; p. 133; 2000 w; 35c.

Clark, H. H.—*Ignition of Gas by Miniature Electric Lamps with Tungsten Filaments.*—U. S. Bur. Mines, Technical Paper No. 23; 1912; 5 pp.; 600 w; 20c.

Clifford, Wm.—*Some Fundamental Principles of Safety Lamp Construction.*—Coal & Coke Op., Oct.31, p. 276; 3000 w*; 25c.

Clifford, Wm.—*Clifford's Method of Safety-Lamp Testing;* [Republication from Manchester Geol. Soc., Trans. for 1885].—Coal & Coke Op., Sept.19,1912; p. 178; 1200 w*; 25c.

Deszenyi, J.—*Acetylene in Underground Mining.*—Acetylene, Vol. 9, 1912; p. 204-205; 45c.

Ferree, C. E.—*Tests for the Efficiency of the Eye under Systems of Illumination, and a Preliminary Study of the Causes of Discomfort.*—Illuminatg. Engg. Soc., Proc.; Sept.,1912; 20 pp; 50c.

Griffiths, David J.—*A New Electric Lamp.*—Coal Age, Dec.7,1912; p. 807; 1200 w*; 20c.

Haldane, J. S.—*Effects of Deficiency of Oxygen on the Light of a Safety Lamp;* [Read to S. Staff. & Warwickshire Inst. Mng. Engrs.; abstract].—Coll'y Guardn., Oct.25, p. 835; 2000 w; 35c. Also in Iron & Coal Trades Rev., Oct.25, p. 672; 2000 w; 35c.

Harris, J.—*The Clowes Hydrogen Gas-Testing Safety-Lamp.*—Sci. & Art of Mng., Sept.28.1912; p. 92; 600 w*; 35c.

Harthill, B.—*Flame Caps and Firedamp Mixtures.*—Coal Age, July6,1912; p. 17; 600 w; 20c.

Hachita, M. S.—*The Carbide Lamp and Carbon Dioxide.*—Coal Age, July27,1912; p. 128; 1000 w; 20c.

Heym, W.—*Elektrische Glühlampen in Kohlengruben;* [Electric safety lamps in coal mines].—Kali. Erz & Kohle, June25, 1912; p. 627; 1600 w; 35c.

Horstmann, H. C., and V. H. Tousley.—*Modern Illumination, Theory and Practice.* —London, 1912; $3 (book).

Hortens, J.—*Entzündung von Gasen durch elektrische Lampen;* [Tests on the supposed inflammability of firedamp on exposure to the incandescent filaments of broken electric lights].—Zentral Verbd. Bergbau Betriebsl. Oestr., Zts.; June1,1912; p. 336; 1800 w; 35c.

Huston, G.—*Acctylene Mine Lamps;* [Use in Coeur d'Alenes].—Mng. Sci., Sept.26, 1912; p. 200; 1000 w; 20c.

Jones, W. E.—*Acetylene Lamps;* [Baldwin mine lamp].—Sci. & Art of Mng., Nov. 9, p. 157; 500 w; 35c.

Llewellyn, T. L.—*Illumination at the Coal Face with Special Reference to the Incidence of Miners' Nystagmus;* [Read to S. Staff. & Warwicks. Inst. Mng. Engrs.; abstract].—Coll'y Guardn., Oct.25, p. 836; 5500 w*; 35c. Also in Iron & Coal Trades Rev., Oct.25, p. 666; 4000 w*; 35c.

Lof.—*Electric Mining Applications.*—See under Electricity.

Maderni, P.—*Lampe de mine "le Lion";* [The Maderni "Lion" acetylene mine lamp]. —Jnl. du Four Electriq., July1,1912; p. 308; 800 w*; 35c.

Philippi, —. *Utilisation de l'enérgie électrique dans les mines anglaises;* [Applications of electricity in the mines of Gt. Britain].—Lumière Electriq., No. 4, 1912; p. 109-113*; 75c.

Redmayne, R. A. S., and others.—*Testing of Safety Lamps;* [Report of Home Office committee].—Coll'y Guardn., Sept.13, 1912; p. 531; 3000 w*; 35c. Also in Iron & Coal Trades Rev., Sept.13, p. 386; p. 391; 3000 w*; 35c.

Rushmore, D. B.—*A New Electric Miners' Lamp.*—Amer. Inst. Mng. Engrs., Bull. 67; July,1912; p. 739-746*; $1.15.

Rzehulka, A. — *Die Sicherheitslampe;* [Safety lamps].—Kohleninteressent, June1, 1912; p. 123; June15, p—; 4000 w; 50c.

Schofield, J. T.—*Ackroyd & Best Lamp Lighter for Safe Underground Use.*—Sci. & Art of Mng., Oct26, p. 140; 500 w*; 35c.

Simpson, C.—*Clanny Safety Lamp.*—Sci. & Art of Mng., June22,1912; p. 544; 1000 w*; 35c.

Smith, Kenneth.—*The Photos Miners' Electric Lamp.*—Coll'y Guardn., July12, 1912; p. 74; 500 w*; 35c.

Sutton, J.—*Flame Caps and Firedamp.*— Coal Age, Aug.10,1910; p. 198; 500 w; 20c.

Varney, N. E.—*Pocket Candlestick for Miners.*—Mng. Sci., July4,1912; p. 564; 1000 w*; 20c.

Varney, N. E.—*Folding Pocket Candlestick;* [Varney mine stick].—Mines & Methods, July,1912; p. 527; 200 w*; 20c.

Weiss and Ott.—*Das neue Lichtmess Laboratorium des Gaswerks Zürich;* [New illumination-testing laboratory of the Zurich gas works].—Jnl. f. Gasbeleuchtg., July27,1912; pp. 737-740*; 75c.

———. *Acetylene Lamps;* [Disadvantages in surveying].—E. & M. J., Sept.28, 1912; p. 579; 500 w; 25c.

———. *Acetylene Lamps Underground.* —E. & M. J., Aug.24,1912; p. 338; 350 w; 25c.

———. *An Improved Apparatus for the*

Examination of Flame Caps; [New Baird-Tatlock instruction equipment].—Coll'y

———. *Approved Safety Lamps;* [Discusses requirements in Gt. Britain].—Coll'y Guardn., Sept.13,1912; p. 543; 2400 w; 35c. Guardn., Sept.27, p. 635; 1600 w*: 35c.

———. *Die Grubensicherheitslampe "Ceag";* [The "Ceag" electric safety lamp].—Elektrotechn. Anzgr., Sept.26, p. 995-996*; 50c.

———. *Dissolved Acetylene, Another New Rand Industry.*—S. Afr. Mng. Jnl., Sept.14, p. 43; 1800 w; 35c.

———. *Electric Hand Lamps and the New Tests.*—Iron & Coal Trades Rev., Sept. 20,1912; p. 431; 2000 w; 35c.

———. *Electric Lamps for Miners;* [Announcement of award of British Home Office prize].—El. Rev. (London), Aug.23, 1912; p. 319; 500 w; 35c. Also noted in Coal and Coke Op., Aug.29, p. 140; 500 w; 20c. Also in Coal Age, Aug.31, p. 288; 400 w; 20c.

Also discussed, with descriptions of winning lamps, in Electrician, Aug.23, p. 831; 3000 w*; 35c.

———. *Electric Lamps for Miners; Successful Lamps in the British Home Office Competition;* [CEAG., Gray-Sussmann, Fors, Stach, Bohres and Wolf lamps].—Iron & Coal Trades Rev., Aug.23,1912; p. 267; Sept.6, p. 351; 4000 w*; 50c. Also in Electrician, Aug.23, p. 831; 2700 w*; 35c. Also in Coll'y Guardn., Aug.23, p. 380; p. 384; Aug.30, p. 428, p. 430; 3600 w*; 50c. Also in El. Rev. (London), Sept.6, p. 366; p. 362; 2500 w*; 35c. Also in Coal Age, Sept. 21, p. 393; 1300 w*; 20c.

———. *Essential Requirements of a Good Safety Lamp.*—Coal Age, Nov.23, 1912; p. 725; 1000 w; 20c.

———. *Estimating Percentages of Firedamp with the Safety Lamp.*—Iron & Coal Trades Rev., July19,1912; p. 81; 750 w; 35c.

———. *Hailwood Patent Observation Machine for Safety-Lamp Gas Caps.*—Coll'y Guardn., Aug.2,1912; p. 225; 1100 w*; 35c. Also in Iron & Coal Trades Rev., Aug.2, p. 162; 1100 w*; 35c.

———. *Hailwood's Patent Electric Miners' Lamp.*—Coll'y Guardn., July26,1912; p. 171; 1200 w*; 35c. Also in Iron & Coal Trades Rev., July26, p. 125; 1200 w*; 35c.

———. *History of the Safety Lamp.*—Mines & Minerals, July,1912; p. 721; 700 w; 35c.

———. *"Justrite" Acetylene Lamp with Adjustable Reflector Hood.*—Coal & Coke Op., Aug.29,1912; p. 141; 500 w*; 25c.

———. *L'oxygénogène Vallet;* [The Vallet oxygenizer and pulmotor].—Echo d. Mines, June10,1912; p. 686; 300 w; 35c.

———. *La lampe à acétylène dans les mines;* [Acetylene mine lamps in U. S., Germany and Mexico].—Jnl. du Four Electriq., Sept.15,1912; p. 400; 1000 w; 35c.

———. *La lámpara eléctrica Hailwood;* [Hailwood electric miner's lamp].—Ingeniería, Sept.20,1912; p. 307; 600 w*; 35c.

———. *Testing of Safety Lamps;* [Official practice at government station at Eskmeals, Cumberland].—Coll'y Guardn., Sept. 20,1912; p. 582; 1800 w; 35c.

———. *The Electric Lamp in the Mine;* [Hirsch outfit].—Coal Age, July13,1912; p. 46; 800 w*; 20c.

———. *The Pape Electric Miner's Lamp.*—Iron & Coal Trades Rev., June14, 1912; p. 963; 1000 w*; 35c.

———. *The "Thomson-Rothwell" Miners' Electric Lamp.*—Iron & Coal Trades Rev,. Sept.13,1912; p. 381; 1000 w*; 35c.

———. *The Varta Electric Mine Lamp.*—Coal Age, Sept.14,1912; p. 358; 1600 w; 20c.

———. *New Permitted Safety Lamp for Belgian Collieries;* [Wolf-Joris No. 4].—Coll'y Guardn., Nov.1, p. 892; 500 w*; 35c.

———. *The Illumination of the Pit.*—Coll'y Guardn., Nov.1, p. 899; 1600 w; 35c.

Mine Telephones

Brown, Gregory.—*Modern Practice in Mine Telephones.*—Coal Age, Dec.7,1912; p. 789; 3000 w*; 20c.

Féder, —. *Téléphones du fond;* [Sparkproof mine telephones].—Soc. de l'Ind. Minérale St. Etienne, Bull., Oct.,1912; p. 387-397*; $1.

Wier, E. M.—*Installation and Maintenance of Telephone, Signal and Power Leads in Mines.*—Coal Mng. Inst. of Amer., Proc. for 1911; 1912; pp. 279-284.

Miners' Nystagmus

See also under "Sanitation," etc.

Hailwood, E. A.—*Nystagmus and Electric Lamps.*—Iron & Coal Trades Rev., Aug.2, 1912; p. 163; 2000 w; 35c.

Signalling

Beaupain.—*Signalisation électrique au puits d'extraction;* [Electric signalling in shaft sinking at the Six Bonniers collieries, Belgium].—Annales d. Mines (Belgiq.), Vol. 17, No. 4; 1912; pp. 1129-1133*; 65c.

Brown, Gr.—*The Use of Telephones in Mines;* [Notes on installation].—Coal Age, Aug.10,1912; p. 179; 1000 w*; 20c.

Charlton, T.—*Notes on Shaft Signalling with Special Reference to the Nodon Rectifier;* [Read to Asso. of Mng. Electr. Engrs., Yorkshire branch].—Iron & Coal Trades Rev., Nov.8, p. 750; 2800 w*; 35c.

Cole, E. L.—*The Mine Telephone of To-Day.*—Coal Age, July27,1912; p. 107; 2400 w*; 20c.

Curtiss, —. *Bell Signalling and Cable Systems in Shafts at the Crown Mines, Ltd.*—S. Afr. Mng. Jnl., June29,1912; p. 673; 750 w; 35c.

Dobbelstein, O.—*Ueber drahtlose Grubentelephonie;* [Wireless mine telephones; read to Allgm. Bergmannstag, Vienna, 1912; abstract].—Montanist. Rundschau, Sept.15, 1912; p. 951; 8000 w; 50c.

Graham, T.—*Line Construction for Mine Telephones.*—Coal Age, Oct.26, p. 584; 500 w; 20c.

d'Haenens, —. *Pompes Rateau, Poste téléphonique;* [Rateau centrifugal pumps and pump-room telephones at Shafts 7 and 8, La Louvière colliery, Belgium].—Annales d. Mines Belgiq., Vol. 17, No. 3; 1912; p. 652; 500 w*; 90c.

d'Haenens, —. *Signalisation électrique;* [Telephone and electric signalling at Fontaine-L'Eveque colliery, Belgium].—Annales d. Mines, Belgiq., Vol. 17, No. 3; 1912; p. 658; 500 w*; 90c.

Henke, —. *Signal- und Schaltanlage für elektrische Grubenbahnen mit Fahrdraht unter Tag;* [Signalling and switching arrangement for electric mine railways].—E. T. Z., Aug.22, pp. 870-871*; 50c.

Hutchinson, F. W.—*Apparatus for Electric Signalling on a 3-mile Plane, with*

Precautions for Installation in Gassy Mines.—Sci. & Art of Mng., July6,1912; p. 576; 500 w*; 35c.

Oliver, J. O.—***Mine Telephones.***—**Coal Age, Aug|31,1912; p. 290; 600 w; 20c.**

Walker, S. F.—*Notes on New Machinery for South Africa;* [Graham & Co. mine telephones].—S. Afr. Engg., May,1912; p. 87; 1000 w*; 35c.

Walker, S. F.—*Troubles with Mine Telephones.*—E. & M. J., Sept.28,1912; p. 588; 1000 w; 25c.

———. *Electric Shaft Signal System, Argonaut Mine, Jackson, Cal.*—E. & M. J., Oct.26, p. 783; 1000 w*; 25c.

GENERAL; TEXTBOOKS

Bulman, H. F., and R. A. S. Redmayne.—*Colliery Working and Management.*—London, 1912 (3d. edition); 300 pp.*; $2; (book).

Byrom, T. H.—*Physics and Chemistry of Mining.*—London, 1912; pp. —; (book).

Haenig, A.—*Die Steinkohle, ihre Gewinnung und Verwertung;* [High-grade bituminous coals; their mining and preparation].—Leipzig, 1912; pp. —*; $2 (book).

Steel, A. A.—*Coal Mining in Arkansas, Volume* 1.—Ark. Geol. Survey, Report; 1912; 632 pp.*; (book).

MINES AND MINING (b*).

CHAPTER XIII.

HAULAGE

Adamson, D.—*Wire Ropes for Lifting Appliances, and Some Conditions That Affect their Durability;* [Read to Instn. of Mechl. Engrs. (British), Belfast, July,1912; abstract].—Iron & Coal Trades Rev., Aug.2, 1912; p. 157; 4000 w*; 35c.

Arnold, H. W.—*Transportation in Modern Industrial Plants;* [Storage battery motors].—Mining & Engg. World, Aug.17, 1912; p. 294; 500 w*; 10c. Also in Salt Lake Mng. Rev., Aug.30, p. 18; 500 w*; 25c.

Bagley, P.—*Setting Off an Underground Heading.*—Sci. & Art of Mng., Sept.14,1912; p. 70; 1000 w*; 35c.

Barnes, H. B.—*Results of Storage Battery Haulage at Idaho Springs, Colo.*—Mng. Sci., Aug.17, p. 100; 2500 w*; 20c.

Blau, E.—*Neuere Ketten-, Seil-, und Rangierförderungen;* [New chain, cableway, and shunt-rail haulage systems of the Skoda works, Pilsen, Bohemia].—Zentral Verbd. Bergbau Betriebsl. Oestr., Zts.; Sept.15,1912; pp. 591-603*; Oct.1, pp. —; 5000 w*; 75c.

Blum, Th.—*Die Vorteile des Umbruchstreckenbetriebes im Erzbergbau;* [Mining veins with haulage system outside of and parallel to the vein; advantages in ore mining].—Montanistische Rundschau, Aug. 1,1912; p. 745; 1800 w*; 45c.

Böhm, A.—*Förderbetrieb mit führerlosen Akkumulatoren Lokomotiven;* [Mine haulage with driverless accumulator locomotives at Von Der Heydt colliery, Prussia].—Kali, Erz & Kohle, Sept.25,1912; p. 955; 1800 w*; 35c.

Bolesta-Malewski, —. *Abbau mit hohem Stoss unter Verwendung von Abbauförderungeinrichtungen;* [Machine mining of thin coal seams using face-conveyors; Ruhr district, Germany].—Glückauf, Oct.26, p. 1749-1758*; Nov.2, pp. —*; 12,000 w*; 75c.

Cain, J.—*Off the Track.*—Coal Age, Aug. 31,1912; p. 280; 500 w; 20c.

Carmichael, N.—*Rapid Mine Tunneling in Arizona;* [Haulage adit, with 2 9000-ft. legs, for conveying ore from mine to mill, Ariz. Copper Co., Clifton].—E. & M. J., Aug.17,1912; p. 295; 4200 w*; 25c.

Christian, L. A.—*Lubrication of Mining Machinery;* [Includes notes on lubrication of car wheels; read to W. Va. Coal Mng. Inst., June,1912].—Coal & Coke Op., June 27,1912; p. 401; 5000 w; 25c.

Cole, E. L.—*Standard Fireproof Mine Stables.*—Coal Age, Aug.17,1912; p. 215; 1000 w*; 20c.

Cole, E. L.—*Design of Mine Trolley Lines.*—Coal Age, June29,1912; p. 1239; 2500 w*; 20c.

Cox, F. A.—*Government Inspection of Pit Ponies.*—Sci. & Art of Mng., Nov.9, p. 157; 500 w; 35c.

Czermak, A.—*Ueber die Wirtschaftlichkeit der diversen Grubenlokomotivförderungen mit besonderer Berücksichtigung des Ostrau-Karwiner Revieres;* [Efficiency comparison of combustion, compressed-air and electric haulage engines, especially in the Ostrau-Karwin coal field, Austria].—Montanist. Rundschau, June16,1912; pp. 589-594*; July1, pp. 638-642*; 75c.

Daniels, J.—*Guiding Ropes on Curves.*—Coal Age, Aug.24,1912; p. 249; 300 w*; 20c.

Davenport, L. D.—*Cutting a Station and Pocket in Ore.*—E. & M. J., Oct.19, p. 733; 800 w*; 25c.

Davenport, L. D.—*A Sublevel Car Dump.*—E. & M. J., Sept.28,1912; p. 587; 300 w*; 25c.

Davenport, L. D.—*Brake for Sublevel Car;* [Chisholm district, Minn.].—E. & M. J., Aug.31,1912; p. 398; 100 w*; 25c.

Duncan, J. C.—*Three Rails for Motor Gathering;* [To avoid dangers from latches and frogs at room mouths and laying switches without interrupting traffic].—Mines & Minerals, July,1912; p. 701; 600 w*; 35c.

Elliott, A. F.—*Electric Mine Locomotive Operation.*—E. & M. J., July13,1912; p. 55; 2500 w; 25c.

English, H. K.—*New Arrangement in Mine Hoisting.*—Coal Age, Dec.7,1912; p. 791; 1500 w*; 20c.

Ford, M.—*Extraction of Dust from Hay by the "Vortex" System;* [For pit ponies; read to Natnl. Asso. of Coll'y Managers, N. of Engl. branch].—Iron & Coal Trades Rev., July5,1912; p. 6; 1000 w*; 35c.

Franke, G.—*Die neue Blende- und Bleierzaufbereitung, Haldensturz- und Wiederverlandanlage der Bleischarleygrube bei Beuthen;* [The new blende and lead-ore treatment, waste-dump and reloading plant of the Blaischarley mine at Beuthen].—Glückauf, Nov.16,1912; p. 1865; 3900 w* (first part); Nov.23; p. 1906; 5800 w* (second part); $1.

Frémont, C.—*New Method of Testing Steel Wire.*—Internatnl. Asso. f. Testing Materials, Bull. 9, June,1912; 7 pp.; 500 w*; 90c.

Fuller, J. T.—*Mining Methods at Kimberley.*—E. & M. J., Nov.9, p. 887; Nov.16, p. —; 2000 w*; 40c.

Futers, T. C.—*Blair's Patent Haulage Bogie;* [Heavy endless rope system at Whitehaven collieries].—Coll'y Guardn., May31,1912; p. 1082; 1200 w*; 30c.

Gates, A. O.—*Hoisting on Inclines;* [Graphic solution of loads on inclined shafts and on haulage on inclined planes].—E. & M. J., Aug.17,1912; p. 299; 1000 w*; 25c. Also in Coal Age, Aug.31, p. 291; 1000 w*; 20c.

*Includes Hoisting and Haulage; Cableways; Trestles; Inclines; Accidents; Sanitation; Safety; Rescue; Labor; Management; Hydraulic Mining; Power Shovels; Mine: Miscellaneous and General.

Giller, Th.—*Neuere Druckluftlokomotiven für Grubenbahnen;* [Newer types of compressed-air locomotives for mines; read to Allgm. Bergmannstag, Vienna, Sept., 1912; abstract].—Montanist. Rundschau, Sept.15, 1912; p. 962; 1000 w; 50c.

Gradenwitz, A.—*German Electric Mine Locomotives.*—E. & M. J., Oct.5,1912; p. 647; 2000 w*; 25c.

Greer, R. B.—*The Margin of Safety Required for Man Haulage at Great Depths.*—S. Afr. Inst. of Engrs., Jnl.; 1911, No. 10, p. 281-284; $1.

Griffith, J. H.—*Government Tests of Wire Rope;* [Requesting suggestions in regard to proposed tests by U. S. Bureau of Standards].—E. & M. J., June29,1912; p. 1259; 500 w; 25c.

Grundy, J.—*Materials of Winding and Haulage Ropes, and Their Preservation.*—Sci. & Art of Mng., June22,1912; p. 548; 1400 w; 35c.

Guérin, —. *Locomotives à air comprimé;* [Compressed-air haulage at the Levant du Flénu collieries, Belgium].—Annales d. Mines (Belgiq), Vol. 17, No. 3; 1912; pp. 631-637; 90c.

Guillery, C.—*Feuerlose Lokomotiven;* [Fireless steam locomotives in mines].—Montanist. Rundschau, Sept.15,1912; p. 942; 1000 w*; 50c.

Haller, —. *Elektrisch angetriebene Aufschiebevorrichtung für Förderkörbe;* [Electrically operated mine-car discharge at shaft and tipple stations].—Glückauf, Aug. 24,1912; p. 1379; 500 w*; 50c.

Hamilton, G. W.—*Gathering by Electric Mine Locomotives.*—Coal & Coke Op., Dec. 5,1912; p. 356; 2500 w; 20c.

Hamilton, G. W.—*An Electric Haulage System.*—Coal & Coke Op., Nov.21,1912; p. 323; 2000 w; 20c.

Hamilton, G. W.—*Preliminary Considerations for the Construction of an Electric Haulage System for Mines.*—Mex. Mng. Jnl., Nov., p. 41; 2000 w*; 25c.

Hamilton, G. W.—*Operating Features of Mine Locomotives.*—Electric Jnl., No. 4, Vol. 9; pp. 345-351*; 50c.

Herbst, Fr.—*Der Sicherheitsfaktor der Schachtförderseile;* [The safety factor in shaft hoisting cables].—Glückauf, June8, 1912; pp. 897-908*; 50c.

Henke, —. *Signal- und Schaltanlage für elektrische Grubenbahnen mit Fahrdraht unter Tag;* [Signalling and switching arrangement for electric mine railways].—E. T. Z., Aug.22, pp. 870-871*; 50c.

Hermanns, H.—*Neuere Eisenbahnwagenkipper;* [Newer railroad-car tipping devices, Demag types].—Dingler's Polyt. Jnl., July13,1912; pp. 440-442*; July20, pp. 454-456*; July27, pp. 472-477; $1.

Hruska, C.—*Ueber die Förderung in Strecken mit kleiner Neigung;* [Haulage in flattish inclines].—Hor. & Hut. Listok, Vol. 13, No. 2, 1912; p. 19-21; No. 3, pp. 34-36; 75c.

Hughes, W. T.—*Socket for a Winding Rope;* [Load; 10 Tons].—Sci. & Art of Mng., July6,1912; p. 575; 1000 w*; 35c.

Hughes, W. T.—*Procedure in Opening Up an Old Road for Haulage.*—Sci. & Art of Mng., Sept.14,1912; p. 65; 300 w*; 35c.

Hughes, W. T.—*Tightening Carriage for an Endless-Rope System of Haulage.*—Sci. & Art of Mng., Sept.14,1912; p. 66; 500 w*; 35c.

Hutchinson, F. W.—*Apparatus for Electric Signalling on a 3-mile Plane, with Precautions for Installation in Gassy Mines.*—Sci. & Art of Mng., July6,1912; p. 576; 500 w*; 35c.

Jackson, D.—*A Method of Capping Winding Ropes;* [Read to Mng. Inst. of Scotland, June15,1912; brief abstract].—Coll'y Guardn., June21, p. 1237; 400 w; 35c. Also in Iron & Coal Trades Rev., June21, p. 998; 400 w; 35c.

Jessup, D.W.—*Underground Mine Switches.*—E. & M. J., Nov.30,1912; p. 1031; 3000 w*; 25c.

Jones, Jos.—*Rules Regarding the Care of Horses Underground.*—Sci & Art of Mng., Aug.31,1912; p. 44; 600 w; 35c.

King, F. F.—*The Use of Gasoline Motors in Coal Mines;* [Advantages and disadvantages].—Coal Trade Bull., Aug.15,1912; p. 38; 1500 w; 25c.

King, A. F.—*Gasoline Motors in Mines;* [Advantages and disadvantages of gasoline haulage-locomotives; read to W. Va. Coal Mng. Inst.].—Mines & Minerals, Sept., 1912; p. 75; 2400 w*; 35c.

Koneczny, Fr.—*Vergleichende Versuche über den Luftverbrauch von Druckluftlokomotiven;* [Comparative tests of air consumption of Meyer, Ruhrtaler, Schwartzkopff and Borsig compressed-air locomotives].—Montanist. Rundschau, Sept. 20, 1912; pp. 1004-1009; 35c.

Leck, Wm. J.—*Modern Rope Haulage;* [at a submarine colliery in Cumberland].—Mng. Engg., Nov., p. 200; 1000 w*; 35c.

Ledouble.—*Transport souterrain par locomotives électriques à accumulateurs;* [Underground haulage with storage-battery locomotives at Chaumonceau collieries, Belgium].—Annales d. Mines (Belgiq.), Vol. 17, No. 4, 1912; p. 1097; 1000 w*; 65c.

Leonarz, A.—*The Use of Discarded Hoisting Ropes as a Return for Electric Circuits;* [Read to Panther Valley Mng. Inst.].—Coal Age, Nov.16, p. 682; 1500 w*; 20c.

Leroux, A.—*La traction souterraine par locomotives à air comprimé dans les mines françaises;* [Mine haulage by compressed-air locomotives in France].—Soc. de l'Ind. Minrl. St. Etienne, Bull., Sept.,1912; pp. 299-336*; $1.15.

Litz, V.—*Untersuchungen an Tunnel-Druckluftlokomotiven;* [Tests of various types of compressed-air locomotives in tunnel construction].—Glückauf, Nov.9, p. 1825-1833*; 45c.

Lloyd, W. D.—*Some Experiences with Winding Ropes and Capels;* [Read to Midland Inst. of Mng. Civ. & Mechl. Engrs., July30,1912; abstract].—Coll'y Guardn., Aug.9,1912; p. 277; 6300 w; 35c. Also in Iron & Coal Trades Rev., Aug. 2, p. 159; Aug. 9, p. 206; 6500 w; 50c.

Lof.—*Electric Mining Applications.*—See under Electricity.

Löschner, S.—*Die Berechnung von Tragseilen;* [Computations for transporting cables].—Wittenberg, 1912; 9 pp*; 50c.

Marshall, A. H.—*Electric Mining Locomotives.*—Electr. Engr., Vol. 8, 1912; No. 23, Suppl., pp. 33-37*; 50c.

McCluskey, H.—*Haulage Roads in Coal Mines;* [Trackway].—Coal Age, Sept.14, 1912; p. 353; 1000 w*; 20c.

McIntyre, J. B.—*Requirements for a Model Mine Track;* [Read to Alabama Coal Operators' Asso.]—Coal & Coke Op., Aug. 15,1912; p. 98; 4400 w; 25c. Also in Coal Trade Bull., Oct.15, p. 35; 3600 w; 25c.

McMahon, S.—*The Wireless Motor in*

Mining; [Storage battery].—Coal Age, Nov.16, p. 671; 600 w; 20c.

Meuskens, Cl.—*Die maschinelle Abbauförderung und ihre Wirtschaftlichkeit im Kalibergbau;* [Mechanical face conveyors in potash mines, especially with compressed-air drive; their practical applications and economy].—Techn. Blätter, June 8,1912; pp. 177-185*; 8000 w*; 35c.

Müller, —. *Einrichtung und Betrieb der elektrischen Lokomotivförderung in der Braunkohlengrube Friedrich Anna bei Moys;* [Electric haulage at the Friedrich Anna lignite mines, Moys, Prussia].—Braunkohle, June14,1912; 6 pp*; 50c.

Nelson, A.—*Precautions and Rules for Safety of Men on Dangerous Haulage Ways.*—Sci. & Art of Mng., June22,1912; p. 546; 1400 w; 35c.

Ohl, W.—*Elektrische Grubenlokomotiven;* [A-E-G electric mine locomotives, accumulator and overhead current types].—A. E. G. Ztg., No. 11, 1912; pp. 1-5*; 50c.

English abstract in Railway News, No. 2529, 1912; pp. 1300-1301*; 50c.

Olzog, —. *Förderung vom Gewinnungspunkte bis zum Füllort unter besonderer Berücksichtigung der modernen Einrichtungen in Westfalen;* [Haulage practice from coal face to shaft station, with special reference to modernized equipments in Westphalia; 1: rails and trackway; 2: trackway, conveyors and loading chutes].—Bergbau, Aug.22,1912; p. 479; Aug.29, p. 493; 3000 w*; 50c.

Perkins, F. C.—*Gasoline Industrial Locomotives; Some Recent Difficult Installations.*—Mines & Minerals, July,1912; p. 737; 1400 w*; 35c.

Perkins, F. C.—*Steam Fireless Locomotive;* [German type].—Coal Age, Aug.24, 1912; p. 257; 1000 w*; 20c.

Pickering, W. H.—*Conveyance of Workmen Underground;* [from report of Yorkshire inspection dstrict for 1911].—Iron & Coal Trades Rev., July19,1912; p. 95; 1000 w*; 35c.

Rath, —. *Fahrbare Kippvorrichtung für Förderwagen;* [Hasenjürgen portable mine-car dumping device at the Constantin colliery, Bochum].—Glückauf, Sept.14,1912; p. 1513; 500 w*; 45c.

Rath, —. *Eine neue Förderwagenkupplung;* [The new Hasenjürgen mine-car coupling].—Glückauf, Aug.24,1912; p. 1379; 3000 w*; 50c.

Recktenwald, J.—*Electrische Streckenföderung mit Ackumulator-Lokomotiven;* [Electrical underground haulage with accumulator locomotives], (part 1).—Fördertechnik, Nov.,1912; p. 242; 2000 w*; 65c.

Rice, C. T.—*Copper Mining Practice at Lake Superior.*—See under Copper.

Rice, C. T.—*Tipple for Mine Cars;* [Copper range, Michigan].—E. & M. J., July20, 1912; p. 108; 600 w*; 25c.

Rice, C. T.—*Copper Range Ore Car.*—E. & M. J.; July13,1912; p. 62; 600 w*; 25c.

Rice, C. T.—*Gasoline Locomotive Underground;* [Desloge lead mines, Mo.].—E. & M. J., Oct.5,1912; p. 636; 500 w; 25c.

Rogers, W. O.—*"Tom Hunter, Hoisting Engineer";* [Discusses rope stresses, inspection and deterioration].—Power, Sept. 17,1912; p. 418; 1800 w*; 15c.

Schultze, K.—*Einige auf der bergmännische Ausstellung zu Essen ausgestellten Gegenstände;* [Some exhibits at the Essen mining exhibition, 1911; Meyers and Schwartzkopf compressed-air locomotives, car-tippers and compressor accessories; electric locomotives].—Bergbau, July4, p. 377; July11, p. 389; 4500 w*; 50c.

Shubart, B.—*Hauling Capacity of Electric Locomotives.*—Coal Age, Sept.28,1912; p. 426; 1000 w*; 25c.

Shubart, B.—*Some Labor-Saving Devices for Handling Mine Cars;* [Especially at end of inclined trams].—Coal Age, June22, 1912; p. 1210; 1000 w*; 20c.

Simpson, C.—*Chief Alterations of the English* 1911 *Act as Regards Haulage and Haulage Roads.*—Sci. & Art of Mng., Oct. 12, p. 116; 1000 w; 35c.

Speer, —. *Die Sicherheit der Förderseile;* [Studies on the safety factor of hoisting cables].—Glückauf, May11,1912; pp. 737-747*; May18, pp. 781-788*; May25, pp. 824-830; July20, pp. 1145-1160*; July 27, pp. 1194-1199*; $1.50.

Stevenson, E. W.—*Damage by Electrolysis;* [Urges care in grounding power cables and in bonding rails].—E. & M. J., June22, 1912; p. 1220; 1600 w; 25c.

Street, J. J.—*Mechanical Haulage Underground;* [Discusses various systems].—Mng. Engg., Aug.,1912; p. 123; 2500 w*; 35c.

Verein für bergbauliche Interessen in Dortmund.—*Jahresbericht für* 1911; [Tests of compressed-air, storage-battery, overhead direct-current and 1-phase alternating-current locomotives in the mines of the Dortmund district, 1911].—Kohle & Erz, June17,1912; p. 637; 2000 w; tables; 35c. Bergbau, July4, p. 380; 1200 w; tables; 35c. From Zts. f. d. Berg-, H-, & Salinenw., No. 4, 1912.

Spanish abstract in Rev. Minera, July1, p. 313; 1600 w; 35c.

Wagner, E. B.—*Determination of Generator Capacity for Mine Haulage.*—Coal Age, June22,1912; p. 1209; 1000 w*; 20c.

Walker, W.—*Use of Old Wire Ropes in Conjunction with Timber as Roof Supports.*—Iron & Coal Trades Rev., July19, 1912; p. 91; 600 w; 35c.

Way, E. J.—*A New Method of Handling Ore in Incline Shafts of Flat Dip;* [at Apex Mines, Rand].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 145; 4000 w*; $1.

Whitfield, T. C.—*Endless-Rope Haulage at the William Pit, Whitehaven;* [Read to Natnl. Asso. of Coll'y Managers, N. of Engl. branch].—Iron & Coal Trades Rev., July5,1912; p. 10; 1200 w*; 35c.

Wille, Fr.—*Seitenkipper für Förderwagen;* [Lateral dump for mine cars].—Fördertechnik, Sept., 1912; p. 193; Oct., p. —; 2000 w*; 75c.

Wittich, Lucius L.—*The Hamilton No. 8 Mine, Kansas.*—M. & M., Dec.,1912; p. 255; 1500 w*; 35c.

Worcester, S. A.—*Surface Improvements at Ajax Mine, Victor, Colo.;* [Self-dumping skip hoists; electric distributing cars and cableway].—E. & M. J., Sept.28,1912; p. 601; 2600 w*; 25c.

Worcester.— *Surface Improvements at Ajax Mine, Victor, Colo.*—See Hoisting.

"Brychan."—*Haulage; The Transmission of Power;* [Chiefly compressed air].—Sci. & Art of Mng., Aug.3,1912; p. 610; 1400 w; 35c.

"Brychan".—*The Construction and Use of Ropes;* [Metal].—Sci. & Art. of Mng., July6,1912; p. 554; 1200 w*; 35c.

M. B.—*Le locomotive a motore a combustione "Oberursel";* [The "Oberursel" gasoline and combustion haulage locomotives].—Rassegna Mineraria, June1,1912; p. 307; 2000 w*; 35c.

"Clansman."—*Colliery Engineering; The Pithead Frame;* [Design of, and forces acting on, headframes].—Sci. & Art of Mng., Aug.31,1912; p. 26; 1000 w*; 35c.

———. Combined Transfer and Dump Car; [Surface haulage at St. Louis Smelting & Refg. Co. mines, Mo.].—E. & M. J., Nov.16, p. 928; 1000 w*; 25c.

———. *A Home-Made 40-Ton Electric Mine Locomotive.*—E. & M. J., Oct.5,1912; p. 638; 300 w*; 25c.

———. *A Self-Oiling Mine-Car Wheel.* —Coal Age, Oct.12, p. 490; 500 w*; 20c.

———. *Automatic Locking Switch for Inclined Plane.*—E. & M. J., Aug.3,1912; p. 206; 400 w*; 25c.

———. *An Automatically Operated Storage-Battery Mine Locomotive;* [at Heydt, Prussia].—El. Rev. (London), Oct.11, p. 567; 500 w; 35c.

———. *Bonnet and Eye Guard for Pit Ponies.*—Iron & Coal Trades Rev., Oct.11, p. 596; 500 w*; 35c.

———. *Car for Tramming Drill Steel;* [in Joplin district, Mo.].—E. & M. J., Aug. 31,1912; p. 395; 100 w*; 25c.

———. *Chain-Driven Haulage Gears.*—Iron & Coal Trades Rev., July5,1912; p. 3; 500 w*; 35c.

———. *Colliery Mine Car Construction.* —Coal Age, July27,1912; p. 114; 2000 w*; 20c.

———. *Die Kohlentransportanlage des städtischen Elektrizitätswerks I in Frankfurt a. M., erbaut als Elektrohängebahn von Adolf Bleichert & Co., Leipzig;* [The coal-transportation plant of the municipal electric plant I in Frankfort on the Main, constructed as an electric suspended railroad by Adolf Bleichert & Co., Leipzig.—Rigasche Industrie-Zeitung, Oct.15,1912, p. 289; 1800 w*; 35c.

———. *Doe Run Mine Car;* [in s. e. Missouri lead district].—E. & M. J., Sept. 14,1912; p. 491; 500 w*; 25c.

———. *Dump for Mine Cars* [With wheels rigidly attached to body; Missouri]. —E. & M. J., Aug.17,1912; p. 299; 600 w*; 25c.

———. *Electric Haulage Gear for India.* —Ir. & Coal Tr. Rev., Nov.22,1912; p. 835; 1500 w*; 35c.

———. *Greasing Mine Car Wheels; Wear on Trolley Wheels; Steel Mine Ties.* —E. & M. J., Sept.14,1912; p. 493, 494; 500 w; 25c.

———. *Hours of Employment of Winding Enginemen;* [British draft regulations]. —Coll'y Guardn., Sept.13,1912; p. 530; 1200 w; 35c. Also in Iron & Coal Trades Rev., Sept.13, p. 385; 1200 w; 35c.

———. *Improved Metallic Rope Fitting.* —Iron & Coal Trades Rev., Oct.11, p. 597; 200 w*; 35c.

———. *Joplin Types of Bucket Elevators.*—E. & M. J., Nov.23,1912; p. 977; 1000 w*; 25c.

———. *Les chemins électriques suspendus Bleichert appliqués à l'exploitation des mines;* [The Bleichert suspended electric railway applied to the exploitation of mines].—Fer et Acier, Oct.,1912, p. 150; 2000 w*; 50c.

———. *Les lokomotives des mines à accumulateurs;* [Electric storage-battery mine locomotives].—Industrie Electriq., Oct. 25, p. 472; 1000 w*; 50c.

———. *Loading Cars from a 3-track Approach.*—E. & M. J., Nov.2, p. 829; 500 w*; 25c.

———. *Marquette Iron Range Continued Progress.*—Mg. & Eng. World, Dec.7, 1912; p. 1031; 4000 w*; 10c.

———. *Mine Car with Round Bottom;* [in Flat River district, Mo.].—E. & M. J., Oct.26, p. 782; 800 w*; 25c.

———. *Mixing, Hoisting and Charging Equipment for Handling Coal and Minerals.*—Eng. Rec., Dec.7,1912; p. 646; 3000 w*; 20c.

———. *Motor Troubles in Colliery Plants;* [Various difficulties and remedies]. —Coal Age, Aug.24,1912; p. 256; 1200 w; 20c.

———. *"New Century" Internal-Combustion Mine Locomotive.*—Iron & Coal Trades Rev., Aug.30,1912; p. 314; 600 w*; 35c. Also in Coll'y Guardn., Sept.6, p. 485; 600 w*; 35c.

———. *New Storage-Battery Narrow-Gage Locomotives;* [General Electric types]. —Engg. & Contractg., Nov.6, p. 511; 500 w*; 20c.

———. *Neuzeitliche Fördermittel in Bergbaubetrieben;* [Recent innovations in mine haulage; belt conveyors and self-emptying rapid-discharge cars].—Techn. Echo, Vol. 3, No. 3, 1912; p. 36-38*; 50c.

———. *Releasing Hook for Cage Testing;* [at Cleveland Cliffs iron mines, Mich.]. —E. & M. J., Sept.28,1912; p. 590; 400 w*; 25c.

———. *Shoeing Mean Mules;* [Special stall].—E. & M. J., July27,1912; p. 155; 400 w*; 25c. Also in Coal Age, Rug.3, p. 149; 400 w*; 20c.

———. *Simple Landing Chairs.*—E. & M. J., Nov.23,1912; p. 976; 250 w*; 25c.

———. *Skip-Car for Flat Grades;* [Used in Joplin district, Mo.].—E. & M. J., July6, 1912; p. 12; 1000 w*; 25c.

———. *Size of Engine in Tail-Rope Haulage.*—Coal Age, Sept.28,1912; p. 436; 600 w; 20c.

———. *Some Practical Aspects of Electric Winding* (So. Africa).—Mg. & Eng. World, Dec.14,1912; p. 1083; 1600 w*; 10c.

———. *Spear Type of Car Dump.*—E. & M. J., Aug.31,1912; p. 395; 500 w*; 25c.

———. *Storage Battery Electric Haulage Locomotive;* [General Electric types]. —Coal & Coke Op., Nov.7, p. 293; 1000 w*; 25c.

———. *Surface Car for Mechanical Haulage;* [between shaft and rock houses, Michigan copper district].—E. & M. J., Sept.7,1912; p. 443; 100 w*; 25c.

———. *The Adair Face-Conveyor.*—Coll. Guard., Nov.22,1912; p. 1035; 2000 w*; 35c.

———. *The Electrical Haul;* [Efficiency in lay-out].—Coal Age, Aug.17,1912; p. 213; 800 w; 20c.

———. *The New Century Mine Locomotives in Cumberland Lead Mines.*—Motor Traction, 1912, No. 381; p. 583-585*; 50c.

———. *The "Otto" Petrol Locomotives for Mines.*—Mng. Engg., Oct.,1912; p. 173; 1200 w; 35c.

———. *The Red Jacket Car;* [Calumet & Hecla mines, Mich.].—E. & M. J., Aug. 3,1912; p. 203; 400 w*; 25c.

———. *Track Spreader and Guard Rail Bracket.*—E. & M. J., Nov.2, p. 832; 200 w*; 25c.

———. *Underground Compressed-Air Hauling Engines;* [Uskside types in S. Wales].—Iron & Coal Trades Rev., Aug.16, 1912; p. 244; 400 w*; 35c.

———. *Underground Haulage at Oak &*

Woodpark Collieries; [6x10 in. compressed-air haulage engine].—Iron & Coal Trades Rev., Oct.11, p. 596; 750 w*; 35c.

HOISTING

Askew, J.—*Three-Phase Hoists at Bantjes Con. Mines, Transvaal;* [Paper read before Inst. Mg. & Met.; abstract].—Mg. & Eng. World, Nov.30,1912; p. 993; 3000 w*; 10c.

Aston, F. J.—*Non-Necessity of Brake Application to Both Crank Shaft and Drum on the Second Motion in Colliery Winders.*—Sci. & Art of Mng., June22,1912; p. 552; 750 w; 35c.

Blau, —. *Die Verwendung der Dampfturbinen bei Hauptschachtförderanlagen;* [Use of steam turbines at mine hoisting plants in Germany].—Dingler's Polyt. Jnl., June22,1912; 6 pp*; 50c.

Blumenfeld, R.—*Die Berechnung der Fördergerüste;* [Computations for headframes]. Eisenbau, No. 1, Vol. 3, 1912; pp. 1-7*; 65c.

Brown, A. W.—*Electrically-Driven Winding Engines in South Africa;* [Read to N. of England Inst. of Mng. etc. Engrs.].—Iron & Coal Trades Rev., Oct.18,1912; p. 632; Oct.25, p. —; 5000 w; 50c.

Bunnell, S. H.—*The Action of the Flywheel.*—Practl. Engr., Aug.15,1912; p. 819; 2200 w; 25c.

Buskett, E. W.—*Can for Lowering Drill Steel.*—E. & M. J., July27,1912; p. 155; 250 w*; 25c.

Case, C. E.—*Graphic Solution of Skip Loads.*—E. & M. J., July27,1912; p. 148; 300 w*; 25c.

Chambers, G. K.—*The Braking of High-Speed Winding Engines;* [Read to S. Afr. Inst. of Engrs.; abstract].—S. Afr. Mng. Jnl., Oct.19, p. 216; Oct.26, p. —; 4000 w; 50c.

Charlton, T.—*Notes on Shaft Signalling with Special Reference to the Nodon Rectifier;* [Read to Asso. of Mng. Electr. Engrs., Yorkshire branch].—Iron & Coal Trades Rev., Nov.8, p. 750; 2800 w*; 35c.

Corbett, R. H.—*Description of an Air-Balanced Hoisting Engine;* [Franklin system; descending skips compress air which is used with steam in hoisting loads; read to Lake Superior Mng. Inst.].—E. & M. J., Sept.21,1912; p. 553; 1400 w*; 25c.

Costello, P. F.—*Advice to Young Stationary Engineers.*—Coal Age, Nov.2, p. 605; 500 w; 20c.

Curtiss, —. *Bell Signalling and Cable Systems in Shafts at the Crown Mines, Ltd.*—S. Afr. Mng. Jnl., June29,1912; p. 673; 750 w; 35c.

Donath, M.—*Die Berechnung rotierender Scheiben und Ringe nach einem neuen Verfahren;* [Computations for rotating drums and rings by a new method].—Berlin, 1912; 16 pp.*; 75c (pamphlet).

Dorgeloh, G. H.—*Liquid Rheostat for Mine Hoists.*—Gen. Electric Rev., May, 1912; 4 pp*; 50c.

Du Pasquier, A. E.—*Electric Winding Engines;* [Paper read before So. Wales Inst. Eng.; abstract].—Elect. (London), Nov.15,1912; p. 212; 2000 w*; 30c.

Edwards, G. E.—*Zimmerman Mine of the Spring Valley Iron Co.;* [Palatka, Mich.; includes notes on steam hoists].—Mining & Engg. World, Aug.17,1912; p. 277; 1500 w*; 10c.

Forbes, C. R.—*Turn Sheave Location and Support;* [for deflecting cable between head sheaves and engine].—E. & M. J., Nov.9, p. 881; 1200 w*; 25c.

Forster, Dr. Ing.—*The Grunewald Safety Attachment for Winding Engines;* [Zeitschrift des Vereines Deutscher Ingenieyre; abstract].—Ir. & Coal Tr. Rev., Nov.22, 1912; p. 828; 1200 w; 35c.

Förster, Dr. — *Sicherheitsvorrichtung Grunewald;* [The Grunewald safety brake for mine hoists; German Pat. No. 200,254 and 203,249].—Berg- & Hüttenm. Rundschau, June5,1912; p. 193; 1200 w*; 35c.

Fuller, J. T.—*Mining Methods at Kimberley.*—E. & M. J., Nov.9, p. 887; Nov.16, p. —; 9000 w*; 40c.

Futers, T. C.—*The "Primus" Car or Tub Controller.*—Coll'y Guardn., June21,1912; p. 1237; 500 w*; 35c.

Futers, T. C.—*A New Detaching Hook;* [Improved King hook].—Coll'y Guardn., June7,1912; p. 1131; 1000 w*; 30c.

Gates, A. O.—*Hoisting on Inclines.*—E. & M. J., Aug.17,1912; p. 299; 100 w*; 25c.

Gillet, —. *Aménagement d'une tour d'extraction sur le puits d'aérage;* [Equipping a ventilating shaft for hoisting men and coal, Bois Communal à Fleurus colliery, Belgium].—Annales d. Mines Belgiq., Vol. 17, No. 3; 1912; pp. 671-677*; 90c.

Gmeyner, E.—*Ueber tonnlägige Förderschächte und eine neuartige Schleppschachtförderung;* [Advantages of inclined over vertical shafts; and the Gmeyner system of chain winding; read to Bergmannstag, Vienna, 1912; abstract].—Montanist. Rundschau, Sept.15,1912; p. 964; 400 w; 50c.

Götz, O.—*Hauptschacht-Fördermaschinen mit Drehstrom-Kollektormotoren;* [Shaft hoisting with alternating-current collector motors].—Kali, Sept.1,1912; p. 409-415*; 45c.

d'Haenens, —. *Signalisation électrique;* [Telephone and electric signalling at Fontaine-L'Eveque colliery, Belgium].—Annales d. Mines, Belgiq., Vol. 17, No. 3; 1912; p. 658; 500 w*; 90c.

Haller, —. *Elektrisch angetriebene Aufschiebevorrichtung für Förderkörbe;* [Electrically operated mine-car discharge at shaft and tipple stations].—Glückauf, Aug. 24,1912; p. 1379; 500 w*; 50c.

Herberts, H.—*Der Elektromotor im Vergleich zur Pressluftmaschine zum Antrieb von Schacht-Fördermaschinen;* [The electric motor vs. compressed-air drive of mine hoists; critical review of Pauly's paper before Amer. Inst. Mng. Engrs.].—Fördertechnik, Sept., 1912; p. 195; 7500 w*; 50c.

Hess, M. D.—*Machine Design: Hoists, Derricks, Cranes.*—N. Y. and London; 1912; pp. vi, 368; 18 plates; 318 figs.; $5 (book).

Hutchinson, F.—*Self-Acting Car Tipplers.*—Sci. & Art of Mng., July20,1912; p. 599; 600 w*; 35c.

Hutchinson, F.—*The Thornewill-Warham Simple High Pressure Hoisting Engine, With Variable Automatic Expansion;* [Use in Midlands-S. Wales coal fields; advantages].—Sci. & Art of Mng., July20,1912; p. 598; 700 w*; 35c.

Jackson, C. F. and J. Staley.—*New Overwinding Gear.*—Coll'y Guardn., Sept.27, 1912; p. 634; 400 w*; 35c. Also in Iron & Coal Trades Rev., Sept.27, p. 457; 400 w*; 35c.

Janzen, —. *Fördermaschinen mit Antrieb durch Drehstromkommutatoren;* [Motors and control for hoisting systems operating under alternating current, with installations at Helmstedt and Braubach].—Elektr.

Kraftbetr. & Bahnen, Aug.4,1912; pp. 469-476*; Aug.14, pp. 481-489*; 75c.

Laverick, R.—*Cage Junction Platforms or Movable Junctions in Place of Keps;* [Read to Natnl. Asso. of Coll'y Managers].—Iron & Coal Trades Rev., Sept.20,1912; p. 428; 2100 w*; 35c.

Lehmann, —. *Ueber die Schachtförderung mittels Becherwerkes;* [Shaft hoisting by means of bucket elevators].—Braunkohle, Sept.27,1912; pp. 405; 412*; 50c.

Lof.—*Electric Mining Applications.*—See under Electricity.

Lunt, H. F.—*Foundations for Prospecting Machinery.*—E. & M. J., Nov.16, p. 927; 700 w*; 25c.

Meller, K.—*Anlagekosten und Wirkungsgrad bei elektrisch betriebenen Hauptschachtfördermaschinen;* [Cost and relative efficiency of electric mine hoists].—Glückauf, Oct.19, p. 1719-1721*; 45c.

Mentzel, Ch.—*Prospecting Headframe;* [and hoisting and dumping equipment].—E. & M. J., Oct.5,1912; p. 636; 1400 w*; 25c.

Möhrle, Th.—*Förderturm oder Fördergerüst;* [Shaft-house and tower with contained hoisting engine *vs.* headframe construction].—Kali, June1,1912; p. 265; 1200 w*; 45c.

Murphy, E. M.—*Electric Hoist at the Hecla Mine;* [Coeur d'Alenes, Idaho; operation and costs].—Amer. Inst. Mng. Engrs., Bull. 69; Sept.,1912; pp. 977-995*; $1.15.

Nelson, A.—*Negative Loads on Winding Engines.*—Sci. & Art of Mng., Aug.3,1912; p. 620; 500 w; 35c.

Oppenheimer, E.—*Zur Frage des Unterseilgewichtes bei Koepeförderung;* [Determining the weight of the tailrope in Koepe hoisting].—Kali, Sept.15,1912; p. 448; 1500 w*; 35c.

Pepin, M. — *Installations électriques, charbonnage du Poirier;* [Electric hoisting at Poirier collieries, Belgium].—Annales d. Mines, Belgiq.; Vol. 17; No. 3; 1912; p. 677-683; 90c.

Pasquier, A. E. du.—*Electric Winding Engines;* [Comparison of systems, and influence of drum profile; from S. Wales Inst. of Engrs., Proc.].—Coll'y Guardn., Sept.20,1912; p. 583; Sept.27, p. —; 8000 w*; 50c. Also in Iron & Coal Trades Rev., Sept.20,1912; p. 413; Sept.27, p. —; 8000 w*; 50c.

Pauly, K. A.—*Deep Mine Hoisting;* [Compares electric vs. compressed-air methods].—Mex. Mng. Jnl., Nov., p. 33; 5000 w*; 25c.

Perkins, F. G.—*Changing Steam Hoist to Electric Drive.*—Mining & Engg. World, Sept.21,1912; p. 535; 250 w*; 10c.

Perkins, F. C.—*An Electric Hoist with Automatic Control;* [Auchinchuive colliery].—M. & S. P., Oct.19, p. 490; 2000 w*; 20c.

Philippi, W.—*Zur Frage der Wirtschaftlichkeit elektrischer Hauptschachtfördermaschinen;* [The question of economy of electric hoisting].—Glückauf, July13,1912; pp. 1109-1119; 6000 w; 50c.

Philippi, Prof., C. G. Kleinschmidt, and Dr. von Handorff.—*Wirtschaftlichkeit elektrischer Hauptschachtfördermaschinen;* [Commercial economy of electric hoists for mines; discussion of Philippi's paper].—Glückauf, Oct.12, pp. 1679-1685; 600 w; 45c.

Pickering, W. H.—*Conveyance of Workmen Underground;* [from report of Yorkshire inspection district for 1911].—Iron & Coal Trades Rev., July19,1912; p. 95; 1000 w*; 35c.

Pütz, O.—*Ein neues Förderkorb Zwischengeschirr;* [A new form of rope socket for cable attachment to hoisting cage].—Glückauf, Sept.21,1912; p. 1554; 1000 w*; 45c.

Rasmussen, J.—*The Rasmussen Electric Hoist.*—Mng. Sci., Aug.1,1912; p. 75; 300 w*; 20c.

Read, T. T.—*Compressed-Air Hoisting at Butte.*—M. & S. P., Nov.2, p. 554; 1800 w*; 20c.

Rice, C. T.—*Copper Mining Practice at Lake Superior.*—See under Copper.

Rice, C. T.—*Mine Cages at the Desloge Cons.,* [Missouri].—E. & M. J., Aug.24,1912; p. 347; 1100 w*; 25c.

Rice, C. T.—*Routine of Joplin Hoisting Practice;* [Rapid steam and electric hoisting from shallow depths].—E. & M. J., Sept. 14,1912; p. 491; 1600 w; 25c.

Rice, E. R.—Graphic Solution of Skip Loads.—E. & M. J., July13,1912; p. 54; 400 w*; 25c.

Rice, E. R.—*Graphic Solution of Skip Loads;* [Criticizes Case's paper].—E. & M. J., Aug.31,1912; p. 389; 200 w; 25c.

Ryba, G.—*Die Thomsonsche Schachtfördereinrichtung mit elektrisch betätigten Senkbühnen am Schachte Julius III der k. k. Bergdirektion Brüx;* [The Thomson electrically operated shaft-station equipment for rapid hoisting at Julius III. shaft, Brüx state coal mine, Austria].—Montanist. Rundschau, Sept.15,1912; p. 945; 1500 w; 45c. Also in Zentral Verbd. Bergbau Betriebs; Oestr.; Zts.; Sept.15,1912; p. 603; 1600 w; 45c.

Seeber, R. R.—*Mine Hoisting Systems Compared;* [Steam vs. other power; criticizes Nordberg's paper].—E. & M. J., Aug. 3,1912; p. 197; 1300 w; 25c.

Springer, J. F.—*Electrically Operated Skip Hoist;* [Martinsburg, W. Va., limestone crushing plant].—Iron Trade Rev., Aug.29,1912; p. 391; 1800 w*; 20c.

Srajn, V.—*Taking a Timber Down a Shaft;* [Computing maximum possible length].—Coal Age, Oct.19, p. 546; 600 w*; 20c.

Staley, J. J.—*Sketch of a 4-Man Hand Crab for Lifting 5 Tons.*—Sci. & Art of Mng., Nov.9, p. 164; 600 w*; 35c.

Steg, C. — *Selbsttätiger Kreiselwipper;* [Self acting car tipper].—Glückauf, Oct.12, p. 1685; 400 w*; 45c.

Stewart, F. D.—*Cage Keeps for a Small Tipple.*—Coal Age, June29,1912; p. 1256; 300 w*; 20c.

Streeter, R. L.—*Blower Machinery of the Steel Industry; Blast Furnaces;* [Blowers, skip hoists, and charging apparatus].—Engg. Mag., Sept., 1912; pp. 864-879*; 35c.

Streeter, R. L.—*Power Machinery of the Steel Industry;* [Iron-ore mining; describes various hoists and use of compressed air].—Engg. Mag., Aug.,1912; pp. 681-698*; 35c.

Sykes, S. W.—*Power Consumption of Hoisting Plants;* [Relative economies of electricity, steam and air].—Mines & Minerals, Aug.,1912; p. 49; Sept., p. —; 6500 w*; 65c.

Thornewill & Warham, Ltd.—*The "Profile" Controller and Overwind Preventer.*—Coll'y Guardn., July19,1912; p. 119; 1000 w*; 35c.

Vaughan, J. A.—*Safety Catches for Mine*

Cages.—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 283; 7500 w; $1.

Wallichs, A.—*Die Berechunug der Hauptschacht-Fördermaschinen;* [Computations for shaft hoisting engines].—Wittenberg, 1912; 15 pp; 14 figs; 75c.

Way, E. J.—*A New Method of Handling Ore in Incline Shafts of Flat Dip;* [at Apex Mines, Rand].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 145; 4000 w*; $1.

White, N. F.; T. R. Dindin; and P. Drain.—*Safety Device for Skips in Inclined Shafts;* [at Mt. Morgan mines, Queensland; read to Australasian Inst. of Mng. Engrs.; abstract].—M. & S. P., Nov.16, p. 631; 1000 w*; 20c.

Wilcox, L. L.—*Skip and Dump Plate for Vertical Shaft;* [Modification of De Beers skip].—E. & M. J., June22,1912; p. 1221; 500 w*; 25c.

Wintermeyer.—*Anfahrregler für Dampffördermaschinen;* [Starting control for steam hoists].—Bergbau, Oct.10, p. 573; 2000 w*; 35c.

Worcester, S. A.—*Bailer for a Winze Hoist;* [800-gals. bailer, Camp Bird mine].—E. & M. J., July27,1912; p. 156; 400 w*; 25c.

"Engine Driver."—*Steam vs. Electric Hoists;* [Safety and driving].—S. Afr. Mng. Jnl., Sept.28, p. 119; 2000 w; 35c.

———. *A. E. G. Electric Winding Plant at Kippax, Yorkshire.*—El. Rev. (London), Sept.27,1912; p. 499; 1000 w*; 35c.

———. *A Large Electric Hoist;* [Dominian colliery No. 14, Nova Scotia].—Canadian Mng. Jnl., Oct.1, p. 684; 600 w*; 25c.

———. *An Automatic Tipper for a Bucket Hoist.*—Engg. Contractng., Oct.25, p. 453; 200 w*; 20c.

———. *An Electrically Driven Cage Loader.*—Coal Age, Oct.19, p. 525; 500 w*; 20c.

———. *Apparatus for Control of Overspeeding and Overwinding;* [Several W. Australian types].—Canadian Mng. Jnl., Nov.1, p. 734; 5000 w*; 25c.

———. *Apparatus for Control of Over-Speeding and Over-Winding in Winding Engines;* [Melling's].—S. Afr. Mng. Jnl., Sept. 28, p. 123; 400 w; 35c.

———. *A Transvaal Electric Winding Plant;* [West Rand Cons. electric hoists 1 and 2].—Australian Mng. Standd., Sept.19, p. 277; 800 w*; 35c.

———. *Built-Up Headgear Pulleys;* [Douglas & Grant sectional equipment].—Iron & Coal Trades Rev., July12,1912; p. 58; 350 w*; 35c.

———. *Chairs for Drop-Bottom Cages;* [in southeastern Missouri].—E. & M. J., Aug.3,1912; p. 206; 250 w*; 25c.

———. *City Deep Electric Man Hoist;* [Equipped with Eddy current brake].—S. Afr. Mng. Jnl., June15,1912; p. 574; 750 w*; 35c.

———. *Copper Range Ore Skip;* [6-ton skips at Champion mine, Lake Superior].—E. & M. J., June29,1912; p. 1265; 800 w*; 25c.

———. *Das Leonard Kontrollsystem für elektrische Förderanlagen;* [The Ward-Leonard control in electric mine hoists].—Kali, Erz & Kohle, Sept.25,1912; p. 960; 1500 w; 35c.

———. *Deep Hoisting Problems and the Men Who Solved Them;* [on the Rand].—S. Afr. Mng. Jnl., Oct.5, p. 140; 1000 w; 35c.

———. *Drop Bottom Cages;* [Used in southeastern Missouri].—E. & M. J., Aug. 3,1912; p. 204; 750 w*; 25c.

———. *Electric Shaft Signal System, Argonaut Mine, Jackson, Cal.*—E. & M. J., Oct.26, p. 783; 1000 w*; 25c.

———. *Electric Winders for Canada;* [for Acadia Coal Co.].—Iron & Coal Trades Rev., June28,1912; p. 1031; 500 w*; 35c.

———. *Elektrische Industriebahnen;* [Some Siemens-Schuckert types of mine and industrial electric locomotives].—Kohle & Erz, Oct.14, p. 1078; 300 w*; 35c.

———. *Federal Lead Co. Cage and Skip;* [in southeast Missouri district].—E. & M. J., Oct.19, p. 734; 500 w*; 25c.

———. *Gott's Controlling Gear;* [to prevent overspeeding and overwinding].—Coll'y Guardn., May31,1912; p. 1083; 1000 w*; 30c.

———. *Headframe with Guy-Rope Bracing;* [at No. 4 shaft, St. Louis Smltg. & Refg. Co. mines].—E. & M. J., Aug.10, 1912; p. 254; 400 w*; 25c.

———. *Hoisting By Electricity in Mines;* [Notes on German practice].—Coal Age, Sept.7,1912; p. 317; 1200 w*; 20c.

———. *Joplin Ore Buckets, and Bucket Dump Hook.*—E. & M. J., Aug.10,1912; p. 253-254; 1800 w*; 25c.

———. *Joplin Type of Horse Whim.*—E. & M. J., Aug.3,1912; p. 205; 1000 w*; 25c.

———. *Largest Electric Mine Hoist in America;* [Christopher Coal Mng. Co., Franklin county, Ill.].—Mining & Engg. World, July20,1912; p. 112; 1000 w; 10c. Also in E. & M. J., July27, p. 154; 600 w; 25c. Also in Coal & Coke Op., July25, p. 54; 1000 w; 25c. Also in El. Rev. (Chicago), Aug. 3, p. 227; 1000 w; 20c.

———. *Method of Hanging Ladders.*—E. & M. J., July20,1912; p. 110; 250 w*; 25c.

———. *Méthodes améicaines pour la commande des machines d'extraction;* [Electric mine-hoist control methods in America].—Industrie Electriq., Oct.25, pp. 464-468*; 50c.

———. *New German Cable Clamp.*—Coal Age, Nov.23,1912; p. 720; 1000 w*; 20c.

———. *Portable Car Dump for Outside Work;* [Hasenjürgen device on dumps at Bochum; from "Glückauf," Sept.14].—Coal Age, Oct.19, p. 544; 300 w*; 20c.

———. *Skip Accidents on the East Rand; Suggestions for Safety-Catch Inventors.*—S. Afr. Mng. Jnl., Sept.14, p. 38; 1200 w; 35c.

———. *Skip-Car for Flat Grades;* [Used in Joplin district, Mo.].—E. & M. J., July6, 1912; p. 12; 1000 w*; 25c.

———. *Steel Headframe at Negaunee Mine.*—E. & M. J., July6,1912; p. 11; 250 w*; 25c.

———. *Suggested Economies in Mine Hoisting;* [Light gasoline motor for small mines].—Mining & Engg. World, Aug.10, 1912; p. 246; 300 w; 10c.

———. *Taking 25-ft. Steel Timbers Down a Shaft.*—Coal Age, Sept.7.1912; p. 334; 600 w*; 20c.

———. *The Electrical Equipment of a South Wales Colliery;* [New Britannia colliery at Pengam; includes description of modified Ilgner flywheel hoist].—Canadian Mng. Engr., June15,1912; p. 405; 1800 w*; 25c.

———. *The O'Kelly Safety Hook.*—Mining & Engg. World, June29,1912; p. 1374; 300 w; 10c.

———. *The Prevention of Overwinds;* [The Caledonia controller].—Sci. & Art of Mng., Aug.3,1912; p. 608; 1200 w*; 35c.

———. *The Use of Baby Air Hoists in Mines;* [in Australia].—Austral. Coal & Iron Trades Rev., Oct.2, p. 97; 600 w; 35c.

———. *Treuil d'extraction électrique de la Soc. Anon. des Charbonnages de Nöel-Sart-Culpart, à Gilly;* [Electric hoist at the Nöel-Sart-Culpart colliery, Gilly].—Rev. Electriq., Vol. 17, 1912; pp. 221-226*; 50c.

———. *Truck for Lowering Timber.*—E. & M. J., July13,1912; p. 59; 250 w*; 25c.

———. *Untersuchung einer Abdampfturbine auf Zeche ver. Helene & Amalie;* [Tests of an exhaust-steam turbine plant used for air compression and hoisting at the Helene & Amalie colliery, Prussia].—Glückauf, July 6,1912; pp. 1082-1084; 50c.

———. *Utilization of Electric Power for Iron Mining;* [In Lake Superior district; II: Economies over steam for hoisting].—Iron Trade Rev., Aug.1,1912; p. 203; 3000 w*; 20c.

———. *Westinghouse Equalizer-System Hoisting Set;* [Tests of electric hoist at Calumet & Arizona Mng. Co.].—B. C. Mng. & Engg. Record, July,1912; p. 380; 1200 w*; 35c.

CABLEWAYS; TRESTLES; INCLINES.

Ash, S. H.—*Automatic Blocks for Inclines.*—Mines & Minerals, Oct.,1912; p. 138; 1000 w*; 35c.

Ash, S. H.—*Derailing Switches for Slopes.*—Mines & Minerals, Nov., p. 196; 800 w*; 35c.

Blau, E.—*Neuere Ketten-, Seil-, und Rangierförderungen;* [New chain, cableway, and shunt-rail haulage systems of the Skoda works, Pilsen, Bohemia].—Zentral Verbd. Bergbau Betriebsl. Oestr., Zts.; Sept.15,1912; pp. 591-603*; Oct. 1, pp. —; 5000 w*; 75c.

Blau, E.—*Neuere Ausführungen von Drahtseilbahnen für Bergbau- und Hüttenzwecke;* [Some newer types of aerial cableways and accessories for mines and mills].—Montanist, Rundschau, Nov.1, pp. 1155-1158*; Nov.15, pp. —; 5000 w*; 75c.

Fourmarier.—*Installation de mise à terril;* [Beer system of movable incline for waste disposal at Horloz colliery, Belgium]. Annales d. Mines (Belgiq.), Vol. 17, No. 4, 1912; pp. 1021-1025*; 65c.

Gariel, M.—*Transporteur aérien des aciéries d'Imphy;* [Canal-barge unloading cranes and aerial cableway of the Imphy steel works, Nièvre, France].—Echo d. Mines, June6,1912; p. 666; June10, p. 683; 2000 w*; 50c.

Gates, A. O.—*Hoisting on Inclines;* [Graphic solution of loads on inclined shafts and on haulage on inclined planes].—E. & M. J., Aug.17,1912; p. 299; 1000 w*; 25c. Also in Coal Age, Aug.31, p. 291; 1000 w*; 20c.

Hewitt, Wm.—*Aerial Tramways at Bingham Canyon, Utah.*—Mining & Engg. World, Sept.7,1912; p. 435; 2700 w*; 10c.

Hruska, C.—*Ueber die Förderung in Strecken mit kleiner Neigung;* [Haulage in flattish inclines].—Hor. & Hut. Listok, Vol. 13, No. 2, 1912; p. 19-21; No. 3, pp. 34-36; 75c.

Jorgensen, F. F.—*Handling Rock and Wastes in Iowa Coal Mines;* [Compares inclined trams and aerial cableways for culm piles].—Iowa Engr., Oct., p. 3-10*; 50c.

Mann, F. P.—*Concrete Trestle near Copenhagen, Denmark.*—Engg. Record, Oct. 26, p. 454; 600 w*; 20c.

Mansfield, R. E.—*Aerial Railways in Switzerland.*—U. S. Consul. Rep., Aug.19, 1912; p. 890; 750 w; 20c.

Parma, Al.—*Die Haldenseilbahn des Werkes Providence bei Marchienne-au-Pont;* [The coal culm cableway at the Providence mine, Marchienne-au-Pont, Belgium].—Kohleninteressent, Sept.15,1912; p. 217; 2000 w*; 35c.

Payne, H. M.—*The Evolution of the Cableway;* [Including latest type, the balanced cable crane].—E. & M. J., June29, 1912; p. 1278; 1600 w*; 25c.

Ryba, G.—*Einige Sicherheitsvorrichtungen bei der Förderung auf geneigten Bahnstrassen;* [Some safety equipments in haulage over inclined planes].—Zentral Verbd. Bergbau Betriebsl. Oestr.; Zts.; Sept.15, 1912; p. 584; Oct. 1, p. —; 5000 w*; 75c.

Shubart, B.—*Some Labor-Saving Devices for Handling Mine Cars;* [Especially at end of inclined trams].—Coal Age, June22, 1912; p. 1210; 1000 w*; 20c.

Tupper, C. A.—*Ore Transporting on Island of Elba;* [Cableways, unloading and docking facilities].—Iron Age, June20,1912; p. 1510; 1500 w*; 30c.

Tupper, C. A.—*Conveying Ore to Vessels on Inaccessible Coasts;* [Cableways, crane, etc., installation, chiefly for loading iron in Cuba, Elba and Spain].—Mining & Engg. World, July20,1912; p. 93; 4000 w*; 10c.

Tupper, C. A.—*Operation of Argentina Tramway;* [22-mile cableway, Chilecito to Upulungos, Famatina copper district].—E. & M. J., Sept.28,1912; p. 605; 1800 w*; 25c.

Way, E. J.—*A New Method of Handling Ore in Incline Shafts of Flat Dip;* [at Apex Mines, Rand].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 145; 4000 w*; $1.

Worcester. — *Surface Improvements at Ajax Mine, Victor, Colo.*—See Hoisting.

———. *A Cableway of Large Capacity;* [From port of Savona, Italy, to Ligurian Alps; 11 miles].—Engg. Record, June29, 1912; p. 717; 250 w. 20c.

———. *A New Suspended Railway in the Tyrolese Alps;* [Passenger-carrying].—El. Rev. (London), Nov.8, p. 752; 600 w*; 35c.

———. *A Stiff Cableway Carriage.*—E. & M. J., Nov.16, p. 930; 200 w*; 25c.

———. *Aerial Ropeway at the Blaydon Burn Pits of the Pristman Collieries, Ltd.*—Iron & Coal Trades Rev., June28,1912; p. 1037; 500 w*; 35c.

———. *A Unique Ropeway;* [Sandune Island].—Engg. Rev., June,1912; p. 503-e; 1000 w*; 35c.

———. *Automatic Locking Switch for Inclined Plane.*—E. & M. J., Aug.3,1912; p. 206; 400 w*; 25c.

———. *Gravity Yard for a Ballast-Crushing Plant;* [near Piedra, Cal.].—Engg. Record, June22,1912; p. 695; 1000 w; 25c.

———. *New Coal Transportation Plant;* [Suspension railway for municipal electric plant near Spree river, Charlottenburg].

—Coal Age, Sept.14,1912; p. 359; 1000 w*; 20c.

———. *Une installation de chemin aérien de dimensions extraordinaires;* [Bleichert cableway at the Orconera Iron Ore Co. mines, Biscay, Spain].—Rev. Noire, March 31,1912; p. 149; 1800 w*; 35c. Also in Fer et Acier, March, p. 31; 1800 w*; 35c.

Also in German in Organ d. Bohrtechniker, Apr.1,1912; p. 74; 1800 w*; 35c. Also in Dingler's Polyt. Inl., May25,1912; p. —; 45c.

In Spanish in Rev. Minera, Apr.1,1912; p. 153; 1500 w; 35c.

In English in Iron & Coal Trades Rev., May31, p. 881; 882; 1000 w*; 35c.

ACCIDENTS

Adams, G. F.—*Coal Mining in India in 1911;* [Abstract of official report].—Coll'y Guardn., Oct.11, p. 742; Oct.18, p. 787; Oct. 25, p. —; 8000 w; 65c.

André, R.—*Les accidents dans les fabriques de briques silico-calcaires;* [Statistics of accidents in French sandlime-brick works, 1902-1910].—Rev. d. Matériaux, June,1912; p. 67-B; 1200 w; tables; 65c.

Ashworth, Jas.—*Did the Bignall Hill Mine Explode?* [N. Staffordshire, Nov. 25, 1911; discusses probability of blast of hot after-damp and flameless combustion in mine "explosions"].—Coal Age, Aug. 17,1912; p. 217; 1200 w*; 25c.

Bartonec, F.—*Schacht "Campi" in Bochnia;* [The "Campi" shaft in the Bochnia salt mine, Galicia, and the cave-in of 1912].—Oestr. Zts. f. Berg- — H-wesen, May4, 1912; p. 248; 1000 w*; 45c.

Cole, E. L.—*Some Mining Accidents;* [Studies of various causes].—Coal Age, July13,1912; p. 45; 1500 w; 20c.

Dague, J. H. and S. J. Phillips.—*Mine Accidents and Their Prevention;* [with 200 mine photographs by W. B. Bunnell; D. L. & W. R. R. Co. manual for instruction of miners, especially non-English-speaking].—Scranton, Pa.; 1912; 69 pp.*; 50c.

Dean, Samuel.—*Prevention of Coal-Dust Explosions.*—Coal Age, Nov.30,1912; p. 756; 4000 w*; 20c.

Denison, F. N.—*Earthquakes, Strains and Stresses in Relation to Colliery Explosions.*—Canadian Mng. Inst., Trans.; Vol. 15, Pt. 1; 1912; pp. 26-31; $1.15.

Eddy, L. H.—*Recovering Burned Dredge Machinery;* [Natomas No. 8 dredge, American river, Cal., burned Oct.29,1911].—E. & M. J., July13,1912; p. 67; 1800 w; 25c.

Fauck, A.—*Eine Gasexplosion in Siebenburgen;* [The natural gas explosion near Kissarmas, Transylvania].—Oestr. Zts. f. Berg- & H-wesen, May11,1912; p. 265; 600 w; 45c.

Griffith, Wm.—*No. Likelihood of Municipal Fires Following Surface Caving;* [in Scranton district, Pa.].—Black Diamond, Sept.21, p. 22; 1000 w*; 35c.

Grossman, H.—*Unfälle der chemischen Industrie im Jahre* 1911; [Accident statistics in German chemical works in 1911].—Chemiker Ztg., July23, p. 838-840; 1000 w; 35c.

Hager, D.—*Some of the Accidents Occurring in Oil Wells.*—Mining & Engg. World, Aug.17,1912; p. 290· 750 w; 10c.

Hamilton, J.—*The Progress in Scottish Mining Methods in* 60 *Years;* [Presidential address, Instn. Mng. Engrs; chiefly on mine accidents, and statistics].—Instn. of Mng. Engrs. (British), Trans; Vol. 43, No. 2; 1912; pp. 219-228*; $2.

Hoffman, F. L.—*Mining Casualties in Newfoundland;* [Statistics, mortality rate; chiefly iron mining].—E. & M. J., July20, 1912; p. 126; 3200 w; 25c.

Hoffman, F. L.—*Accidents in Bituminous (Pa.) Mines;* [Statistics, 1906-1910].—Coal Age, July27,1912; p. 119; 2000 w; tables; 20c.

Hoard, H. and F. L. Sizer.—*Air Blasts or Earth Movements in the Coeur d'Alenes.*—Mines & Minerals, Sept.,1912; p. 87; 1100 w; 35c.

Horton, F. W.—*Preliminary Statement on Coal-Mine Accidents in the U. S.,* 1910, 1911 *and Jan.-April,* 1912].—U. S. Bur. Mines pamphlet; 13 pp.; 20c.

Hudson, Joseph G. S.—*Accidents in Mines.*—Jnl. Mg. Soc., N. S., Vol. XVII, 1912; p. 27; 6 p.; 50c.

Jackson, C. F. V.—*Queensland Mines Inspection;* [Report for 1911; extracts on coal developments, accidents, metalliferous mines, etc.].—Qu. Govt. Mng. Jnl., June, 1912; p. 266; 4200 w; 35c.

Jeffreys, J. E.; R. T. Rhys, and E. Sweeney.—Sixteenth Biennial Report of the State Mine Inspectors for the Two Years Ending June 30, 1912.—Des Moines, Iowa, 1912; 110 pp; $1.

Johnson, Tom.—*So-Called Air Blasts and Roof Pressure.*—Cheml. Met. & Mng. Soc. of S. Afr., Jnl.; Aug.,1912; p. 37; 1200 w; 90c.

Kotze, R. N.—*Air Blasts and Subsidences;* [on the Rand].—E. & M. J., Sept. 21,1912; p. 556; 700 w*; 25c.

Kummer, W.—*Die Inundation der Viktoria- und Habsburg-Schächte bei Brüx im Februar des Jahres,* 1909; [Study of the flooding of the Viktoria and Habsburg shafts by the overflow waters of the Kommern Lake district, Brüx, Bohemia, February, 1909].—Montanist. Rundschau, June 1,1912; p. 521; 3500 w*; 45c.

Laing, J.—*Annual Report of the Dept. of Mines for the Year Ending June* 30, 1911.—Charleston, W. Va., 1912; 307 pp.; $1.

McClusky, H.—*Mine Accidents in the Pittsburg Coal Seam.*—Coal Age, Sept.7, 1912; p. 323; 500 w; 20c.

Morin, L.—*La catastrophe de la Clarence;* [Taffanel's zone systems and the Clarence disaster, Pas-de-Calais].—Echo. d. Mines, Oct.7, p. 1026; 1500 w; 35c.

Phillips, S. U.—*Gas and Oil Wells in Mining Regions;* [Reviews accidents in Pennsylvania, and precautions].—Coal Age, July27,1912; p. 129; 750 w; 20c.

Powell, J. W.—*The Bellevue Mine Explosions, Alberta.*—Coal Age, Nov.2,1912; p. 617; 750 w; 20c.

Ralph, Jos.—*Accidents and the Metalliferous Mines Act;* [British rate, and proposed new inspection methods].—Mng. Jnl., July20,1912; p. 717; 724; 4000 w; 35c.

Rice, Geo. S.—*Accidents from Falls of Roof and Coal.*—U. S. Bur. Mines, Miners' Circular No. 9; 16 pp*; 20c.

Abstract in Coal & Coke Op., Nov.14, p. 310; 1800 w; 25c.

Roderick, J. E.—*Causes of Fatal Accidents in Pennsylvania Coal Mines;* [From annual of Pa. Dept. of Mines for 1911].—Coal & Coke Op., Aug.15,1912; p. 101; 1500 w; 25c.

Ross, D.—*Industrial Accidents in Illinois,* 1911.—Ill. Bur. Labor Statistics, 5th Report; 1912; 364 pp.; $1.

Smith, Samson.—Mine Explosion Due to Lightning; [near Mineral, Va., June17, 1912].—Coal Age, July6,1912; p. 18; 500 w; 20c.

Stirling, J. T. and J. Cadman.—*The Bellevue Explosions, Alberta, Canada;* [Caused by sparks from falls of roof; read to Instn. of Mng. Engrs., Birmingham, Engl., Sept.,1912].—Coll'y Guardn., Sept.13, 1912; p. 534; 5000 w; 35c. Also in Iron & Coal Trades Rev., Sept.13, p. 378; Sept.20, p. 426; 6000 w; 50c.

Strzeleckji, —. *List of Fatal and Non-Fatal Explosions of Firedamp or Coal Dust; and Barometer, Thermometer, etc. Readings for* 1911.—N. of England Inst. of Mng. & Mechl. Engrs., Trans.; Sept.,1912; pp. 105-109; $2.

Taffanel, M.—*L'explosion de la Clarence et les Arréts-Barrages;* [The explosion in the Clarence mine and the arresting barriers; abstract].—L'Echo de Mines, Oct.24, 1912; p. 1106; 5000 w; 50c.

Valiquette, J. H.—*Accidents in Mines* [Quebec].—Quebec Dept. Mines Rep. f. 1911; 1912; pp. 42-52; 75c.

Ver. f. f. Bergbaulichen Interessen Elsass-Lothringen.—*Jahresbericht für das Jahr* 1911; [Iron-ore mining statistics and accidents in Lorraine-Luxemburg, 1911].—Glückauf, Aug.24,1912; pp. 1374-1379; 50c.

Whiteside, F. W.—*The Hastings Explosion;* [north of Trinidad, Colo.; due to defective gasket in Wolf lamp].—Coal Age, June29,1912; p. 1246; July6, p. 5; 2500 w*; 30c.

Wigand, —. *Die Schlagwetterexplosion im Kahlisalzbergwerk Aller-Nordstern bei Grosshäuslingen am Nov.* 27, 1911; [The firedamp explosion in the Aller-Nordstern potash mine near Grosshäuslingen, Prussia, Nov. 27, 1911].—Zts. f. Berg-, H.-, & Salinenw., Vol. 60, No. 2; 1912; pp. 214-225*; 90c.

Willing, H.—*Die Gebirgsschläge in Flöz Neuflöz im Bezirke des Bergrevieres Dortmund I unde die Massnahmen zu Ihrer Verhütung;* [Falls, creep, and underground pressure breaks in the Neuflöz coal seam, Dortmund I district; and precautionary measures].—Techn. Blätter, July13,1912; p. 217; July20, p. —; 5000 w*; 50c.

E. G.—*Erdölgrubenbrände;* [Fire at the Concordia oil well, Moreni district].—Allgm. Oestr. Chemiker Ztg., July16,1912; p. 111; 300 w; 45c.

———. *Accidents in South African Mines;* [From official report for 1911].—S. Afr. Mng. Jnl., Oct.12, p. 193; 1800 w; 35c.

———. *Accidents survenus en* 1910 *dans les exploitations minérais;* [Summary table of statistics of French mining accidents, 1910].—Soc. Amicale de Douai, Bull., June 10,1912; p. 351-352; 35c.

———. *Accidents from Explosives in* 1911; [Abstract from 36th annual report, H. M. inspectors of explosives, Cd. 6240].—Coll'y Guardn., June28,1912; p. 1293; 3000 w; tables; 35c. The report is also abstracted in Iron & Coal Trades Rev., June 28, p. 1032; 2500 w; 35c.

———. *Another Rescue Apparatus Victim;* [Death of Superintendent Edw. Painter at Swansea].—Iron & Coal Trades Rev., Nov.1, p. 721; 600 w; 35c.

———. *Appareils à vapeur; Accidents survenus en* 1911; [Steam engines and apparatus in Belgium, accidents in 1911].—Annales d. Mines, Belgiq., Vol. 17, No. 3; 1912; pp. 837-849; 90c.

———. *Carbonaceous Dust Explosions;* [Accidents in Glasgow and Liverpool provender mills, 1911; precautions suggested].—Engnrg., June28,1912; p. 877; 2000 w; 35c.

———. *Coal Mines Inspection,* 1911; [Digests of official reports of district inspectors].—Coll'y Guardn., Aug.23,1912; Suppl.; pp. xxviii*; 35c.

———. *Das Grubenunglück auf Zeche Lothringen;* [Notes on the Lorraine catastrophe].—Bergbau, Oct.10, p. 575; 1600 w; 35c.

———. *Das Grubenunglück auf Zeche Lothringen;* [The Lorraine mine explosion, Bochum].—Zentral Verbd. Bergbau Betriebsl. Oestr., Zts.; Nov.1, p. 693; 2700 w; 45c.

———. *Die amtlichen Feststellungen über das Grubenunglück auf Zeche Lothringen;* [Official findings on the Lorraine mine explosion, Bochum].—Deu. Bergwerks Ztg., Nov.9, p. 1; 1500 w; 35c.

———. *Die tödlichen Verunglückungen beim Bergwerksbetrieb im Oberbergamtsbezirk Dortmund im Jahre,* 1911; [Statistics of fatal accidents in the Dortmund district, 1911].—Glückauf, June22,1912; p. 1005; 1500 w; tables; 50c.

———. *Die Ursache der Grubenkatastrophe auf der Zeche Lothringen bei Bochum;* [The explosion at the Lothringen pit near Bochum, and its causes].—Oestr. Ungar. Montan & Metall. Ind. Ztg., Aug.25, p. 6; 2000 w; 35c.

———. *Disastrous Fire at the Knights' Deep Crusher Station.*—S. Afr. Mng. Jnl., Aug.17,1912; p. 920; 1500 w; 35c.

———. *Electrical Accidents in Mines in* 1911; [British].—Iron & Coal Trades Rev., Aug.2,1912; p. 169; 7500 w; 35c.

———. *Explosion at Cadeby Main Colliery;* [35 dead, including H. M. chief inspectors for Yorkshire and Derbyshire].—Iron & Coal Trades Rev., July12,1912; p. 48; p. 59; 2000 w*; 35c. Also in Coll'y Guardn., July12, p. 79; p. 84; 6000 w; 35c. Also in Mng. Jnl., July13, p. 695; 1200 w; 35c. Also in Sci. & Art of Mng., July20, p. 588; 1200 w; 35c. Also in Coal Age, July 27, p. 118; 750 w; 20c.

———. *Flooding of Superba Mine;* [Fatal results of heavy rains near Unionport, Pa.].—Mines & Minerals, Sept.,1912; p. 69; 2100 w*; 35c.

———. *Gasquellenbrand in Kissarmas;* [Natural gas developments at Kissarmas, Hungary; and on some fired gas wells].—Allgm. Oestr. Chemiker Ztg., Sept.1,1912; p. 134; 600 w; 45c.

———. *Industrie Minérale dans le Nord et Pas-de-Calais en* 1911; [Abstracts of official reports on mining in Nord and Pas-de-Calais, France, in 1911].—Soc. Amicale de Douai, Bull; Oct.10, pp. 661-680; Oct.25, pp. 700-712; 50c.

———. *La catastrophe des mines de la Clarence;* [The "Clarence" explosion, Pas-de-Calais, France].—Rev. Noire, Sept.15, 1912; p. 434; 6600 w; 35c.

———. *L'incendie des sondes pétrolifères de Moréni;* [The fire in the Moreni oil wells].—Rev. du Pétrole, May,1912; 4 pp*; 75c.

———. *Mine Subsidences on the Rand;* [From official report for 1911].—S. Afr. Mng. Jnl., Oct.5, p. 143; 1800 w; 35c.

———. *Mitteilungen über einige der bemerkenswertesten Explosionen beim preussischen Steinkohlenbergbau im Jahre* 1911; [Remarks on some of the most noteworthy explosions at the hard-coal mines of Prus-

sia in 1911.—Ztschr. f. Berg-, H.-, & Salinenw., Vol. 60, No. 2; 1912; pp. 208-213*; 90c.

———. *Mt. Lyell Mining Disaster;* [Fire in the workings].—Australian Mng. Standd., Oct.17, p. 364; 1200 w; 35c.

———. *Skip Accidents on the East Rand; Suggestions for Safety-Catch Inventors.*—S. Afr. Mng. Jnl., Sept.14, p. 38; 1200 w; 35c.

———. *Statistique des industries extractives et métallurgiques en Belgique* 1911; [Statistics of mining and metallurgy in Belgium 1911].—Annales d. Mines (Belgiq.), Vol. 17, No. 4; 1912; pp. 989-1088; 65c.

———. *The Coal Mining Industry of Japan.*—Coal Age, Nov.23,1912; p. 718; 1500 w; 20c.

———. *The Extent and Volume of Earth Slides at Culebra Cut, Panama Canal, and the Remedy Being Employed.*—Engg. & Contractg., Oct.2,1912; p. 374; 1200 w*; 20c.

———. *Some Observations on Last Year's Accident Record;* [in U. S., 1911].—Coal & Coke Op., July18,1912; p. 40; 1000 w; 25c.

———. *The Gayton Mine Explosion;* [Henrico, near Richmond, Va.].—Coal Age, July27,1912; p. 113; 500 w; 20c.

———. *The Hastings Coal Mine Disaster;* [near Trinidad, Colo.].—Mines & Minerals, Aug.,1912; p. 9; 2000 w*; 35c.

———. *Unfälle beim Bergwerksbetrieb im Oberbergamtsbezirk Breslau im Jahre* 1911; [Accident statistics in the Breslau mining division, 1911].—Glückauf, Aug.24, 1912; p. 1382; 1000 w; tables; 50c.

———. *Unglücksfälle durch Schlagwetter und Kohlenstaub,* 1911; [Statistics of firedamp and coaldust explosions in coal mines and potash mines in Prussia in 1911].—Ztschr. f. Berg-, H.-, & Salinenw., Vol. 60, Statistical No. 1; 1912; pp. 63-70; 90c.

———. *Verunglückungen mit tödlichem Ausgange beim Bergwerksbetriebe Preussens* 1911; [Statistics of fatal accidents in mining in Prussia in 1911].—Ztschr. f. Berg-, H.-, & Salinenw., Vol. 60, Statistical No. 1; 1912; pp. 48-62; 90c.

———. *Zum Grubenunglück auf Zeche Osterfeld;* [Explosion at the Osterfeld colliery, Prussia, July, 1912; 16 dead].—Deu. Bergwerks Ztg., July10,1912; p. 1; 1000 w; 35c.

———. *Zum Unglück auf Zeche Osterfeld;* [The gas explosion at the Osterfeld colliery, Ruhr basin, Prussia].—Techn. Grubenbeamte, July22,1912; p. 143; 1500 w; 35c.

SANITATION; SAFETY; RESCUE

In Mining

Andrews, J. B.—*The Beginnings of Occupational Disease Reports.*—Amer. Labor Legisl. Rev., Vol. 1, No. 4, 1912; pp. 107-113.

Aron, A.—*The Fight Against Underground Fires;* [Translated by R. D. Hall, from Memoire No. 10, Series 13; Annales d. Mines, France].—Coal Age, Sept.14,1912; p. 366; 1800 w; 20c.

Ashworth, Jas.—*Inability to Test for Gas;* [Urges investigation of eye-sight of miners unable to perceive a cap].—Coal Age, June22,1912; p. 1215; 2100 w; 20c.

Ashworth, Jas.—*Miners' Nystagmus.*—Coll'y Guardn., May31,1912; p. 1090; 500 w; 30c.

Beard, J. T.—*Some Points of Interest in Mine Ventilation.* (Paper read before West Virginia Coal Mining Institute).—Mg. Sci., Dec.5,1912; p. 358; 3500 w; 20c.

Beattie, J. M.—*The Effect Produced on the Lungs by the Inhalation of Coal Dust and Other Dust;* [From report of Explosions in Mines committee (British)].—Iron & Coal Trades Rev., Aug.2,1912; p. 155; 3000 w*; 35c.

Bencke, A.—*Industrie-Krankheiten und ihre Bekämpfung;* [Industrial diseases and their prevention and treatment].—Gesundheit, No. 1, 1912; p. 169-173; 50c.

Blackburn, Bryan.—*Elevated Tanks for Fire Protective Service.*—Eng. Mag., Dec., 1912; p. 385; 2000 w*; 35c.

Bowen, D., and W. E. French.—*Safety Devices in Connection with Electrical Machinery and Apparatus for Coal Mines;* [Read to Instn. of Mng. Engrs., London, June, 1912].—Coll'y Guardn., June7,1912; p. 1136; June14, p. —; 7500 w*; 50c. Also in Iron & Coal Trades Rev., June7, p. 912; June14, p. —; 7500 w*; 50c.

Calder, J.—*Scientific Accident Prevention.*—Amer. Labor Legislat. Rev., No. 4, Vol. 1, 1912; pp. 14-24.

Carter, T. L.—*The Engineer in the Tropics.*—Mng. Mag., Aug.,1912; p. 129; 4000 w*; 45c.

Charlton, W. H.—*Insurance on Mine Property.*—E. & M. J., Aug.31,1912; p. 391; 1200 w; 25c.

Clark, H. H.—*The Factor of Safety in Mine Electrical Installations.*—U. S. Bur. Mines, Technical Paper No. 19; 1912; 14 pp.; 20c.

Clark, H. H.—*Ignition of Gas by Miniature Electric Lamps with Tungsten Filaments.*—U. S. Bur. Mines, Technical Paper No. 23; 1912; 5 pp.; 600 w; 20c.

Cole, E. L.—*Standard Fireproof Mine Stables.*—Coal Age, Aug.17,1912; p. 215; 1000 w*; 20c.

Conder, Hartwell.—*The Mt. Lyell Disaster.*—Aust. Mg. Stand., Oct.24,1912; p. 393; 3500 w; 35c.

Conibear, Wm.—*Cleveland Cliffs System of Safety Inspection;* [Read to Lake Superior Mng. Inst., 1912].—Iron Trade Rev., Sept.12,1912; p. 483; 2500 w; 20c. Also in E. & M. J., Oct.19, p. 733; 800 w; 25c.

Cooke, G. W.—*The Prevention of Gob Fires in Fiery Mines;* [Advocates hydraulic filling].—Mng. Jnl., Aug.,1912; p. 755; 400 w; 35c. Also in Iron & Coal Trades Rev., July26, p. 123; 400 w; 35c.

Court, Dr. J.—*Miner's Nystagmus;* [Read to Ophthalmological Congress, Oxford, 1912; abstract].—Iron & Coal Trades Rev., July26,1912; p. 124; 1000 w; 35c. Also in Optician, Vol. 43, 1912; p. 1099; p. 87-88; 75c.

Cunynghame, Sir H., R. A. S. Redmayne, and others.—*The Relative Inflammability of Coal Dusts;* [Report of British Explosions-in-Mines Committee].—Coll'y Guardn., Oct. 11, p. 733; Oct. 18, p. 783; 8500 w*; 50c.

Dague, J. H. and S. J. Phillips.—*Mine Accidents and Their Prevention;* [with 200 mine photographs by W. B. Bunnell; D. L. & W. R. R. Co. manual for instruction of miners, especially non-English-speaking].—Scranton, Pa.; 1912; 69 pp.*; 50c.

Davies, E. I.—*Safety Inspection in Illinois.*—Amer. Labor Legisl. Rev., No. 4, Vol. 1, 1912; pp. 81-101.

Dean, Samuel.—*The Coal Dust Question.*—M. & M., Dec.,1912; p. 245; 3000 w*; 35c.

Denis, H.—*Appareils respiratoires à oxygène comprimé, avec régénération de l'air expiré;* [Respiratory equipments using compressed oxygen, with regeneration of expired oxygen].—Portfeuille Economiq. d. Machines, No. 10, 1912; pp. 9-16*; 75c.

Denker, Dr.—*Schutz gegen Sprengstücke;* [Blasting in quarries, and protection against accident from flying rocks].—Zts. f. Schiess & Sprengstoffwesen, June15,1912; p. 241; 2100 w; 35c.

Denker, W.—*Unfallverhütung in Sprengarbeiten in Steinbrüchen;* [Accident prevention in blasting and the handling of explosives in quarries; with special reference to the commoner explosives and exploders, and legal regulations].—Berlin, 1912 (2d edition); 205 pp.; $1 (book).

Dixon, H.—*Does Moisture Aid Exploding Methane?*—Coal Age, Aug.24,1912; p. 266; 700 w; 20c.

Dixon, H. B.—*Home Office Experimental Station for Research on Explosions in Coal Mines;* [Read to Brit. Asso. Adv. of Sci.; abstract, with discussion].—Coll'y Guardn., Sept.20,1912; p. 585; 1000 w; 35c.

Doty, Major A. H.—*A Manual of Instruction in the Principles of Prompt Aid to the Injured.*—N. Y. and London, 1912 (5th edition); pp. xv, 229; 85 figs.; $1.75 (book).

Eye, C. M.—*Pioneering in the Tropics.*—M. & S. P., Sept.21,1912; p. 370; 3000 w*; 20c.

Eysselsteijn, Dr. G. van.—*Die Methoden der künstlichen Atmung;* [Methods of artificial respiration and revivification; with special reference to drowning and suffocation].—Berlin, 1912; 128 pp.; $1.50 (book).

Fantini, O.—*White Labor on the Gold Coast.*—Mng. Jnl., Aug.17,1912; p. 830; 500 w; 35c.

Ferree, C. E.—*Tests for the Efficiency of the Eye under Systems of Illumination, and a Preliminary Study of the Causes of Discomfort.*—Illuminatg. Engg. Soc., Proc.; Sept.,1912; 20 pp; 50c.

Forster, Dr. Ing.—*The Grunewald Safety Attachment for Winding Engines;* [Zeitschrift des Vereines Deutscher Ingenieyre; abstract].—Ir. & Coal Tr. Rev., Nov.22, 1912; p. 828; 1200 w; 35c.

Fuller, J. T.—*Sealing Off Condemned Loading Places.*—Mines & Minerals, Sept., 1912; p. 104; 500 w*; 35c.

Garforth, W. E.—*The Coal Dust Question;* [Presidential address, Instn. of Mng. Engrs., London, June6,1912]. — Coll'y Guardn., June7, p. 1138; 5000 w; 30c. Also in Iron & Coal Trades Rev., June7, p. 907; 5000 w; 30c.

Good, F.—*First-Aid Meet at Helena, Mont.*—Coal Age, Oct.26, p. 586; 800 w*; 20c.

Goodale, S. L.—*Modern Methods in Coal Mining;* [Safety provisions in H. C. Frick Coke Co. mines, Penna.].—Coal Trade Bull., Aug.1,1912; p. 29; 3300 w; 25c.

Gow, A. M.—*Safety in Mine Operation;* [Practice of Oliver Iron Mng. Co., Minnesota].—Mex. Mng. Jnl., July,1912; p. 19; 1600 w*; 25c.

Grabein, P.—*Unterirdische Krankenhäuser;* [Underground hospital and first-aid rooms].—Deu. Bergwerks Ztg., June30, 1912; p. 1; 1000 w; 35c.

Gray, F.—*What is Being Done for Safety to Miners;* [Read to Coal Mng. Inst. of Amer., June 1912].—Coal Trade Bull., Aug. 15, p. 56; 2500 w; 25c. Also in Coal & Coke Op., July 18, p. 33; 2100 w; 25c.

Grahn, —. *Die neuen Tauchgeräte "Westfalia";* [The new "Westphalia" breathing equipment].—Glückauf, Sept.7,1912; pp. 1448-1451*; 50c.

Griffiths, David J.—*A New Electric Lamp.*—Coal Age, Dec.7,1912; p. 807; 1200 w*; 20c.

Griffiths, David.—*Needed Education in Coal Mining.*—Coal Age, Nov.30,1912; p. 753; 2500 w; 20c.

Hahn, O. H.—*Refraction of Light in Firedamp;* [Haber-Löwe interferometer for detecting methane in air mixtures down to 1/100th of 1%].—Coal Age, July27,1912; p. 122; 1000 w*; 20c.

Hailwood, E. A.—*Cadeby Main Colliery Disaster;* [Discusses greater precautions required in rescuing parties].—Iron & Coal Trades Rev., July19,1912; p. 86; 750 w; 35c.

Hailwood, E. A.—*Nystagmus and Electric Lamps.*—Iron & Coal Trades Rev., Aug.2,1912; p. 163; 2000 w; 35c.

Hall, R. D.—*The Testing Stations Conference.*—Coal Age, Sept.28,1912; p. 424; 3000 w*; 20c.

Hardman, R. C.—*Camp Sanitation.*—Engg. News, Oct.17, p. 714; 1800 w*; 25c.

Hargar, J.—*Gob Fires in Mines and Their Prevention;* [Read to Manchester Geol. & Mng. Soc.; abstract].—Iron & Coal Trades Rev., Oct.11, p. 587; 1300 w; 35c.

Harthill, B.—*Flame Caps and Firedamp Mixtures.*—Coal Age, July6,1912; p. 17; 600 w; 20c.

Heckman, W.—*Schutz ges gen die Gefahren des Bergbaues;* [Protection from the dangers of mining]. (Address delivered before the Beamtenverein Glückauf at Halle, Germany).—Bergbau, Nov.14,1912; p. 646; 1500 w*; 25c.

Herbst, Fr.—*Der Sicherheitsfaktor der Schachtförderseile;* [The safety factor in shaft hoisting cables].—Glückauf, June8, 1912; pp. 897-908*; 50c.

Heys, W.—*Re-Opening of a Fiery Colliery Which Has Been Sealed Owing to Fire.*—Sci. & Art of Mng., July6,1912; p. 574; 1200 w; 35c.

Hoffman, Frederick L.—*Miners' Phthisis on the Rand* (first article).—E. & M. J., Nov.30,1912; p. 1035; 3500 w; 25c; Dec. 7,1912; p. 1081; 3500 w; 25c.

Holbrook, E. A.—*Work of the U. S. Bureau of Mines with Reference to Coal Mining.*—Jnl. Mg. Soc., N. S., Vol. XVII, 1912; p. 33; 11 p; 50c.

Holmes, J. A.—*The Work of the U. S. Bureau of Mines.*—Amer. Labor Legisl. Rev., 1912, No. 1; pp. 125-130.

Hortens, J. — *Entzündung von Gasen durch elektrische Lampen;* [Tests on the supposed inflammability of firedamp on exposure to the incandescent filaments of broken electric lights].—Zentral Verbd. Bergbau Betriebsl. Oestr., Zts., June1,1912; p. 336; 1800 w; 35c.

Hotchkiss, S. C.—*Occupational Diseases in the Mining Industry.*—Amer. Labor Legisl. Rev., Vol. 2, No. 1, 1912; pp. 131-139.

Hudson, Joseph G. S.—*Accidents in Mines.*—Jnl. Mg. Soc., N. S., Vol. XVII, 1912; p. 27; 6 p.; 50c.

Hutchinson, F.—*Prevention of Spread of Underground Colliery Fires.*—Sci. & Art of Mng., Aug.3,1912; p. 623; 750 w*; 35c.

Jenkins, H. C.—*Rescue Apparatus in*

Mines; [Discusses various types and necessary training of miners and officials; read to Natn. Asso. of Coll'y Managers, Scottish branch; abstract].—Iron & Coal Trades Rev., June7,1912; p. 919; 2000 w;

Keogh, A.—*The Engineer in the Tropics.* —Mng. Mag., Oct., p. 289; 700 w; 45c.

Knowles, M.—*Relation of the Employe to Sanitary Improvements;* [Read to Alabama Coal Operators' Asso.].—Coal & Coke Op., Aug.1,1912; p. 65; 3500 w; 25c.

Kotze, R. N. (Chairman).—*Miners' Phthisis Committee's Report, Part II;* [Transvaal]. S. Afr. Mng. Jnl., Oct.5, p. 148; 1200 w; 35c.

Lamb, H. M.—*The Rescue Stations of the Alberta Government.*—Canadian Mng. Jnl., Oct.15, p. 705; 1500 w; 25c.

Langrogne, E.—*A Mudding Machine for Mine Fires;* [From Annales d. Mines Belgiq., July,1911].—Coal Age, Oct.12, p. 498; 2100 w*; 20c.

Lauffler, C. A.—*Electrical Injuries; Their Causation, Prevention and Treatment.*—New York, 1912; 77 pp; 50c (book).

Lisse, —. *Elektrische Anlagen in Schlagwettergruben;* [Electric equipments in fiery mines; read to Allgm. Bergmannstag, Vienna, 1912; abstract].—Montanist. Rundschau, Sept.15,1912; p. 963; 1000 w; 50c.

Listauer, A.—*Der persönliche Staubschutz in der Gewerbehygiene;* [Industrial hygiene as regards personal ability of the individual to combat the dust evil].—Deu. Wochenschr. f. Oeffentl. Gesundheitspfl., No. 4, Vol. 43, 1912; pp. 777-783.

Little, Wm. and W. Tatham.—*Procedure Underground on Discovery of Smoke Descending the Shaft.*—Sci. & Art of Mng., Sept.28,1912; p. 91; 600 w; 35c.

Liwehr, A. E.—*Die Tätigkeit der V. S. im bergbaulichen Sicherheitsdienste;* [Activity of the U. S. government in mine safety].—Zentral Verbd. Bergbau Betriebsl. Oestr., Zts.; Aug.1,1912; p. 449-455; 45c.

Llewellyn, T. L.—*Illumination at the Coal Face with Special Reference to the Incidence of Miners' Nystagmus;* [Read to S. Staff. & Warwicks. Inst. Mng. Engrs.; abstract].—Coll'y Guardn., Oct.25, p. 836; 5500 w*; 35c. Also in Iron & Coal Trades Rev., Oct.25, p. 666; 4000 w*; 35c.

Lloyd, W. B.—*The Smith Gas Pump;* [Gas pump and lamp attachment for detecting gas pockets].—Mines & Minerals, July,1912; p. 705; 1000 w*; 35c.

MacGregor, H. S.—*The Campaign Against Phthisis;* [Ventilation and dust allaying at Simmer Deep mine, Rand].—S. Afr. Mng. Jnl., July6,1912; p. 694; 1000 w; 35c.

McInnis, M. A.—*A System for Fire Prevention.*—Coal Age, Nov.2, p. 599; 200 w; 20c.

McTigue, Edward J.—*Protection of Mining Machine Cables and Men Handling Them.*—Coal Age, Dec.7,1912; p. 799; 250 w; 20c.

Marks, J. B., and Alley, Gerald.—*The Colorado Fuel & Iron Co.'s Rockville Mine.* —Coal Age, Nov.30,1912; p. 744; 2500 w*; 20c.

Minor, W. H.—*Fires in Mines and Some of Their Causes.*—Mines & Minerals, Sept., 1912; p. 72; 1000 w; 35c.

Munroe, H. S.—*Physiological Effects of Carbon Monoxide.*—Columbia School of Mines Quar'ly, July,1912; pp. 340-344; 65c.

Neale, A.—*Gas Wells Through Mine Workings;* [Discusses practice in Pennsylvania, and dangers].—Coal Age, June29, 1912; p. 1255; 75 w; 20c.

Nelson, A.—*Precautions and Rules for Safety of Men on Dangerous Haulage Ways.*—Sci. & Art of Mng., June22,1912; p. 546; 1400 w; 35c.

Nelson, A.—*The First Steps Following an Explosion Underground.*—Sci. & Art of Mng., Sept.14,1912; p. 71; 1000 w; 35c.

Page, A. W.—*"Safety First" Underground; The New Bureau of Mines and its Life-Saving Campaign in the Coalfields.*— World's Work, 1912, No. 5; pp. 549-563*; 50c.

Perkins, Frank C.—*Horizontal Mine Boring Under Pressure.*—M. & M., Dec.,1912; p. 250; 1200 w*; 35c.

Pickering, W. H.—*Hospitals in Coalfields;* [Cottage hospitals in Yorkshire district].—Iron & Coal Trades Rev., July19, 1912; p. 94; 400 w; 35c.

Plummer, F. G.—*Lightning and its Relation to Forest Fires;* [From U. S. Forest Service Bull. No. 111].—Mng. Sci., Oct.24, p. 260; 1800 w; 20c.

Pokorny, Wm.—*Die Schlagwetterversuchsanlage der Westfälischen Berggewerkschaftskasse;* [The firedamp testing station of the Westphalia Mines Association; old abandoned gallery at Gelsenkirchen].— Sprengstoffe, Waffen & Munition; Vol. 7, No. 3; 1911; pp. 29-31; 75c.

Powell, J. W.—*A Gravity Water System;* [for fire protection in Belly River coal field, Alberta].—Coal Age, June22,1912; p. 1223; 800 w*; 20c.

Preston, John C.—*Electrical Safety Devices;* [Third article].—Pr. Elec. & Eng., Nov.,1912; p. 14; 2000 w*; 15c.

Pucci, F. S.—*Degli incendi nelle miniere di solfo;* [Fires in the sulphur mines of Sicily; methods of prevention, control and utilization].—Caltanissetta, 1912; 122 pp; $1 (book).

Pütz, O.—*Das Rettungswesen im Bergbau;* [Mine Rescue Work; technology and legal requirements in Germany and other nations].—Freiberg. 1912; 178 pp.; 150 figs.; $1.50.

Quisenberry, L. L.—*Sealing Off a Mine Fire.*—Coal Age, Aug.31,1912; p. 301; 800 w; 20c.

Rice, Geo. S.—*Mine Fires; Their Causes and Means of Prevention;* [Transactions Am. Inst. Mg. Engrs.].—Mg. & Eng. World, Nov.16,1912; p. 906; 3000 w; 10c.

Rice, C. T.—*Pulmotor at a Lead Mine;* [in southeast Missouri].—E. & M. J., June 29,1912; p. 1267; 300 w; 25c.

Rice, G. S.—*Alarming the Men When a Mine is on Fire.*—Coal Age, Oct.26, p. 573; 500 w; 20c.

Rice, Geo. S.—*Mine Fires, a Preliminary Study.*—U. B. Bur. Mines, Techn. Paper No. 24; 1912; 51 pp.; 20c.

Abstract in Coal & Coke Op., Oct.24, p. 259; 3200 w; 20c. Also in Coal Trades Bull., No.1, p. 31, p. 51; Nov.15, p. —; 12,500 w; 40c.

Roderick, Jas. E.—*Report of Department of Mines of Pennsylvania for* 1911.—Dep. of Mines of Pa., Part 1 (Anthracite), pp* 672; Part 2 (Bituminous), pp* 960.

Roderick, J. E.—*Companies That Have Had No Fatal Accidents in Years;* [Review of Pennsylvania coal-mining concerns].— Coal & Coke Op., Aug.22,1912; p. 113; 1800 w; 35c.

Rollandet, G. J.—*Preventing the Spread of Mine Explosions;* [Cosavello system of

automatically closing doors].—Mng. Sci., Sept.5,1912; p. 151; 750 w; 20c.

Rudeloff, J.—*Die Gefahren beim Gebrauch von Sprengstoffen und deren Verminderung;* [Dangers in the use of explosives; and precautionary measures].—Zts. f. d. Sprengstoffw., Sept.15,1912; p. 357; 4000 w; 45c.

Ryba, G.—*Das Rettungswesen im Bergbau;* [Mine rescue equipment (cont.); Underground hospitals and rescue training schools underground; experiences at various rescue stations].—Zentral Verbd. Bergbau Betriebsl. Oestr., Zts., Oct.1,1912; p. 625-631*; Oct.15, pp. —*; 75c.

Ryba, G.—*Das Rettungswesen im Bergbau;* [Mine rescue equipment (cont.); Stretchers, litters, and first aid equipment].—Zentral Verbd. Bergbau Betriebsl. Oestr., Zts., May15, p. 298-304*; Junel, pp. 322-327*; 65c.

Ryba, G.—*Das Rettungswesen im Bergbau;* [Mine rescue work and equipment (cont.); stretchers for carrying injured through unbreathable gases; first-aid equipment].—Zentral Verbd. Bergbau Betriebsl. Oestr., Zts., Junel5,1912; pp. 363-369*; 631*; Oct.15, pp. —*; 75c; May15, p. 298-304*; Junel, pp. 322-327*; 65c.

Ryba, G.—*Einige Sicherheitsvorrichtungen bei der Förderung auf geneigten Bahnstrassen;* [Some safety equipments in haulage over inclined planes].—Zentral Verbd. Bergbau Betriebsl. Oestr.; Zts.; Sept.15, 1912; p. 584; Oct. 1, p. —; 5000 w*; 75c.

Ryna, Ed.—*Mine Accidents and their Prevention;* [Address before Engineers' Club, Mackay School of Mines, by Nevada State Mine Inspector].—M. & S. P., June22, 1912; p. 859; 4500 w*; 20c.

Sansom, W. H.—*The Draeger Apparatus, Its Chief Advantages and Defects.*—Sci. & Art of Mng., Oct.26, p. 140; 1000 w; 35c.

Shaw, J.—*Nystagmus and Safety Lamps in Mines.*—Coll'y Guardn., Aug.9,1912; p. 283; 600 w; 35c.

Schmidt, P.—*Samariter- und Rettungswesen im Bergbau und ähnlichen Industriezweigen;* [First-aid and rescue work in mining and similar occupations].—Arbeiterfreund, No. 2, 1912; pp. 175-190; 75c.

Schmidt, W. A.—*The Control of Dust in Portland Cement Manufacture by the Cottrell Precipitation Processes;* [Read to Internatnl. Congr. of Appl. Chem'y; abstract].—Met. & Chemi. Engg., Sept.12,1912; p. 611; 1200 w; 35c.

Schnitzler, J.—*Verhütung von Schlagwetter-Explosionen;* [The Kahler-Junker system of precautions against firedamp explosions].—Kohle & Erz, Sept.2,1912; p. 897; 1200 w; 35c.

Schor, —. *Atmungsarten bei Verwendung von Rettungsapparaten;* [Breathing devices and pulmotors in rescue equipment].—Kohle & Erz, Aug.26,1912; 1200 w; 35c.

Schuchart, —. *Zum heutigen Stand der Unfallverhütung- und Versicherung in den V. S.;* [Present status of accident prevention and compensation in U. S.].—Technik & Wirtschaft, Aug.,1912; pp. 519-525; 75c.

Silberstein, E.—*Die neuen Sauerstoff-Rettungsapparate des Drägerwerks Lübeck;* [The Draeger new oxygen helmets and breathing equipment].—Sozial Technik., Jan.,1912, pp. —; Feb., pp. 41-45*; $1.

Smith, J. F.—*First Aid in Alabama Mines.*—Mines & Minerals, Aug.,1912; p. 25; 1600 w*; 35c.

Speer, —. *Die Sicherheit der Förderseile;* [Studies on the safety factor of hoisting cables].—Glückauf, May11,1912; pp. 737-747*; May18, pp. 781-788*; May25, pp. 824-830; July20, pp. 1145-1160*; July 27, pp. 1194-1199*; $1.50.

Stange, Dr.—*Vereinfachte Wundbehandlung bei Verletzungen im Bergbaubetriebe* [Simplified treatment of wounds from injuries in mining].—Erzbergbau, Dec.1,1912, p. 371; 1500 w; 35c.

Stevenson, E. W.—*Damage by Electrolysis;* [Urges care in grounding power cables and in bonding rails].—E. & M. J., June22, 1912; p. 1220; 1600 w; 25c.

Stoek, H. H.—*Co-Operative Mining Investiagtions in Illinois;* [with U. S. Bureau of Mines, looking toward safety and rescue work in coal mining].—Canadian Mng. Inst., Trans.; Vol. 15, Pt. 1; 1912; pp. 17-21; $1.15.

Sutton, J.—*Flame Caps and Firedamp.*—Coal Age, Aug.10,1910; p. 198; 500 w; 20c.

Taffanel, J.—*Experiments at Liévin on the Classification of Coaldust Deposits;* [Abstract and translation of French report].—Coll'y Guardn., Sept.6,1912; p. 483; 1500 w*; 35c.

Taffanel, M.—*L'explosion de la Clarence et les Arrêts-Barrages;* [The explosion in the Clarence mine and the arresting barriers; abstract].—L'Echo de Mines, Oct.24, 1912; p. 1106; 5000 w; 50c.

Tefft, T. A.—*Causes of Fires in Metal Mines;* [and treatment].—Mines & Minerals, Nov., p. 218; 2100 w; 35c.

Titus, R.—*Brandkatastrophen Verminderung;* [Fire in oil regions; measures of prevention and combatting].—Organ d. Bohrtechniker, July16,1912; p. 157; 1500 w; 45c.

Thornton, W. M.—*Ignition of Coal Gas and Methane by Momentary Electric Arcs;* [Read to N. of England Inst. of Mng. etc. Engrs.].—Coll'y Guardn., Oct.18, p. 785; Oct.25, p. —; 8000 w; 50c. Also in Iron & Coal Trades Rev., Oct.18, p. 623; 8000 w*; 35c. Also in Electrician, Oct.18, p. 62; 5000 w; 35c. Also in El. Rev. (London), Oct.18, p. 607; 3500 w*; 35c.

Tornow, Dr.—*Neuere Versuche zur Bekämpfung der Kohlenstaubgefähr;* [Recent experiments in combatting the coal dust danger].—Techn. Blätter, July27,1912; p. 233; Aug.3, p. —; 6000 w; 50c.

Vaughan, J. A.—*Safety Catches for Mine Cages.*—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 283; 7500 w; $1.

Wainwright, J. M., and H. J. Nichols.—*Hookworm Disease;* [From the "Medical News"].—Coal Age, June29,1912; p. 1258; 3600 w; 20c.

Wainwright, J. M. and H. A. Nichols.—*The Relation Between Anthracosis and Pulmonary Tuberculosis;* [Read to Laennec Medical Soc., Baltimore; abstract].—Coal Age, Aug.3.1912; p. 163; 1100 w; 20c.

Way, E. J.—*The Campaign Against Phthisis;* [report of chairman of appliances sub-committee to S. African commission on the Phthisis Bill].—S. Afr. Mng. Jnl., June22,1912; p. 613; 1500 w; 35c.

Whitside, G. F.—*A Colorado First-Aid Contest;* [First contest of Colo. section of Victor American Fuel Co., June-July, 1912].—Mines & Minerals, Sept.,1912; p. 78; 1500 w*; 35c.

Wilson, E. B.—*History of Coal Dust Explosions;* [Discusses historical development of various theories; read to Kent'y Mng. Inst., June10,1912; abstract].—Coal & Coke Op., June20,1912; p. 395; June27, p. —; 3600 w; 25c.

Wilson, H. M. and A. H. Fay.—*First National Mine Safety Demonstration, Pitts-*

burgh, Pa., Oct. 30 and 31, 1911; with a chapter on the *Explosion at the Experimental Mine*, by G. S. Rice.—U. S. Bur. Mines, Bull. 44; 1912; 75 pp*; 20c.

Winborn, A. T.—*The Use of Oxygen, Breathing or Rescue Apparatus;* [Committee report of Monmouthshire Coll'y Owners' Rescue Asso.].—Newport, U. K.; 1912; $1.50 (book).

Young, C. M.—*Dust Explosions in Coal Mines.*—M. & M., Dec., 1912; p. 258; 3000 w; 35c.

Young, Geo. J.—*Fires in Metalliferous Mines.*—Amer. Inst. of Mng. Engrs., Bull. 70; Oct.,1912; pp. 1133-1152; $1.15.

Young, R. J.—*Practical Safeguards and Means of Preventing Industrial Accidents.* —Amer. Labor Legisl. Rev., No. 4, Vol. 1, 1912; pp. 25-44.

Drägerwerk zu Lübeck.—*Periodische Mitteilungen;* [Monthly bulletins on applications of Draeger equipment; No. 1; July, 1912].—Lübeck, 8 pp.* each 20c.

Ver. z. Bekämpfung der Volkskrankheiten im Ruhrkohlengebiet.—*Bericht;* [Report on the hygiene-bacteriologic institute at Gelsenkirchen and the Bochum, Duisburg, Essen and Hagen bacteriologic laboratories of the Society for Combatting Industrial Diseases in the Ruhr coal field].—Essen, 1912; 79 pp.; 75c.

"King's Medallist."—*Dangers of Coaldust in Mines;* [Treatment].—Sci. & Art. of Mng., July20,1912; p. 584; 2000 w; 35c.

M. E.—*Mine Gases, Breathing Apparatus.* —Sci. & Art of Mng., Aug.31,1912; p. 29; 3500 w*; 35c.

M. R.—*Do the Mine Change-Houses Contribute Towards Disease and Illness;* [Faulty conditions on the Rand].—S. Afr. Mng. Jnl., Aug.31,1912; p. 993; 1000 w; 35c.

N. E.—*Colliery Fires;* [Causes, precautions].—Sci. & Art of Mng., July20,1912; p. 580; 1600 w; 35c.

N. Zealand Royal Commission on Mines. —*Report;* [on accident prevention, ventilation, underground sanitation, change and bath houses, miners' phthisis, and utilization of low-grade coals of Westport district].—Iron & Coal Trades Rev., May31, 1912; p. 871; June7, p. 922; 10,000 w; 50c.

———. *Abstract of Minutes of the Meeting of the National Mine Rescue and First-Aid Conference,* 1912, *Pittsburgh.*— Canadian Mng. Jnl., Oct.15, p. 707; 2500 w; 25c.

———. *An Adjustable Mine Stretcher;* [Bayne stretcher; from report of N. Z. Mng. Commission].—Coal Age, July27,1912; p. 132; 500 w*; 20c.

———. *An Explosion Extinguisher;* [Kruskopf automatically spilled quenching tanks].—Iron & Coal Trades Rev., July12, 1912; p. 52; 1000 w*; 35c.

———. *Ankylostomasie dans les soufrières de Sicile;* [Ankylostomiasis in the Sicilian sulphur mines].—Annales d. Mines (Belgiq.); Vol. 17, No. 4; 1912; p. 969; 500 w; 65c.

———. *Annual First Aid Contests;* [Review of various contests in U. S. in 1911].— Mines & Minerals, Nov., p. 183; 5000 w*; 35c.

———. *Another Rescue Apparatus Victim;* [Death of Superintendent Edw. Painter at Swansea].—Iron & Coal Trades Rev., Nov.1, p. 721; 600 w; 35c.

———. *Carbonaceous Dust Explosions;* [Accidents in Glasgow and Liverpool provender mills, 1911; precautions suggested]. —Engnrg., June28,1912; p. 877; 2000 w; 35c.

———. *Change House at Franklin Furnace, N. J.;* [Zinc mines].—E. & M. J., Aug. 24,1912; p. 358; 200 w*; 25c.

———. *Coal Dust Explosions Committee; New Experimental Station in Cumberland.* —Sci. & Art of Mng., Aug.31,1912; p. 38; 2000 w*; 35c.

———. *Common Problems of Deep Level Metalliferous Mining;* [Safety and sanitation; editorial discussion of reports of Queensland, W. Australia and N. Zealand commissions].—S. Afr. Mng. Jnl., July13, 1912; p. 728; 800 w; 35c.

———. *Compressed Oxygen Breathing Helmets.*—Coal Age, Nov.2, p. 609; 3000 w*; 20c.

———. *Der Kampf der Bergarbeiter;* [The miners' fight in Germany, England, and other countries].—Soziale Praxis, 1912, pp. 754-761; pp. 784-793.

———. *Der Steinkohlenbergarbeiterstriek in Grossbritannien im März,* 1912; [Review and statistics of the British coal strike, March,1912].—Zts. f. prakt. Geol., June, 1912; p. 108; 2100 w; 75c.

———. *Disease on Rand Mines.*—S. Afr. Mng. Jnl., July20,1912; p. 769; 1200 w; 35c.

———. *Durham and Northumberland Collieries Rescue Stations; Extensions and Improvements.*—Coll'y Guardn., Aug.16, 1912; p. 331; 1500 w*; 35c.

———. *Electricity and Voltages that are Sometimes Dangerous.*—Mg. & Eng. World, Nov.30,1912; p. 985; 1200 w; 10c.

———. *Essential Requirements of a Good Safety Lamp.*—Coal Age, Nov.23, 1912; p. 725; 1000 w; 20c.

———. *Estimating Percentages of Firedamp with the Safety Lamp.*—Iron & Coal Trades Rev., July19,1912; p. 81; 750 w; 35c.

———. *Explosions in Mines Committee (British). First Report to the Right Honorable the Secretary of State for the Home Department;* [Altofts tests, 1910-1911; includes appendix by Prof. J. M. Beattie on use of stone dust].—London, Cd. No. 6307, 1912; 50c.; (book).

Abstract of Beattie's report in Engnrg., Aug.2,1912; p. 164; 1000 w; 35c.

———. *Field Days and First-Aid Meets;* [Phila. & Reading; Lehigh & Wilkes-Barre Coal Co.; Penna. Coal Co.; Lehigh Cos.].— Coal Age, Sept.28,1912; p. 437; 2500 w*; 20c.

———. *Fire Extinction by Frothy Mixtures* [for combustible liquids].—E. & M. J., July13,1912; p. 78; 600 w; 25c.

———. *Grubenrettungswesen an der kgl. Bergschule;* [Mine rescue equipment and instruction at the royal mining school at Saarbrücken, Prussia].—Saarbr. Bergmanns Kalender, 1912; pp. 42-91; $2.

———. *Guarding Trolley Wires in Mines.* —Coal Age, Dec.7,1912; p. 808; 500 w*; 20c.

———. *Hailwood Patent Observation Machine for Safety-Lamp Gas Caps.*— Coll'y Guardn., Aug.2,1912; p. 225; 1100 w*; 35c. Also in Iron & Coal Trades Rev., Aug.2, p. 162; 1100 w*; 35c.

———. *How Can the Number of Accidents in Mines from Falls Be Reduced?* [Discussion].—Coal Mng. Inst. of Amer., Proc. for 1911; 1912; pp. 213-224.

———. *Immunity from Tetanus.*—Coal Age, July27,1912; p. 126; 1000 w; 20c.

———. *Importance of the Pulmotor in Preserving Life.*—Coal & Coke Op., Aug. 22,1912; p. 125; 1000 w; 25c.

———. *Improving Underground Ventilation on the Rand.*—S. A. Mg. Jnl., Nov.2, 1912; p. 267; 500 w*; 25c.

———. *Inspection at Beaver Cons.;* [Cobalt, Ont.; inspection twice daily, with suggestions for safety].—E. & M. J., Aug.17, 1912; p. 318; 1200 w*; 25c.

———. *International Conference on Mine Safety and Testing Station Methods;* [Washington and Pittsburgh, Sept., 1912].—Coal Trade Bull., Oct.1, p. 27; 2800 w; 25c.

———. *Jahresberichte der gewerblichen Berufsgenossenschaften über Unfallverhütung für* 1911; [Annual reports of German trade unions on accident prevention in 1911]. — Deu. Reichsversicherungsamts, Nachrichten f. 1911; No. 2; 1912; $2 (book).

———. *Mine Fires;* [Recent disastrous fires in America and Australia and precautions].—E. & M. J., Nov.9, p. 869; 1000 w; 25c.

———. *Mine Rescue Stations, N. S. W.; Demonstrations at Newcastle.*—Australian Mng. Standd., Aug.1,1912; p. 106; 1000 w; 35c.

———. *Mine Rescue Work at Witbank.*—S. Afr. Mng. Jnl., June15,1912; p. 585; 750 w; 35c.

———. *Miners' Phthisis in Western Australia.*—M. & S. P., Sept.7,1912; p. 308; 1000 w*; 20c.

———. *Miners' Phthisis Problem on the Rand.*—Mng. World (London), Sept.7,1912; p. 287; 1000 w; 35c.

———. *Miner's Phthisis and Alcohol;* [Drink and predisposition to the disease].—S. Afr. Mng. Jnl., May25,1912; p. 467; 1000 w; 35c.

———. *Miners' Wages in Prussia,* 1911.—Coll'y Guardn., July5, p. 20; 600 w; 35c.

———. *New German Cable Clamp.*—Coal Age, Nov.23,1912; p. 720; 1000 w*; 20c.

———. *New Mine Rescue Apparatus;* [Servius equipment].—Mining & Engg. World, July13,1912; p. 78; 500 w; 10c.

———. *New Rescue Station at Porth, South Wales.*—Iron & Coal Trades Rev., Sept.6,1912; p. 344; 2000 w*; 35c.

———. *Permissible Explosives; Monobel and Carbonite.*—M. & M., Dec.,1912; p. 252; 2200 w; 35c.

———. *Phila. & Reading Coal & Iron Co.'s Competitive First-Aid Drill; Lehigh Valley Coal Co.'s First-Aid Contest.*—Coal Age, Oct.12, p. 504; p. 505; 2000 w*; 20c.

———. *Prevention of Miner's Phthisis;* [Abstract of N. Z. royal commission report].—Mines & Minerals, July,1912; p. 745; 900 w; 35c.

———. *Rescue Stations in Scotland;* [Fife and Clackmannan station].—Coal Age, June29,1912; p. 1252; 750 w; 20c.

———. *Rescue Work in British Collieries.*—Coal Age, July6,1912; p. 20; 1800 w*; 20c.

———. *Safeguarding the Plant from Fire.*—Coal Age, July27,1912; p. 118; 500 w; 20c.

———. *Sanitation at Alabama Collieries;* [Struggle against flies, mosquitoes, etc.].—Coal Age, July6,1912; p. 22; 600 w; 20c.

———. *Sanitary Clothes Hook and Soap Dish for Change House.*—E. & M. J., Aug. 24,1912; p. 350; 350 w*; 25c.

———. *Study of Coal Dust Explosions;* [Proposed British plan, and editorial discussion].—Colliery Guardn., Aug. 2, 1912; p. 220; p. 235; 6000 w*; 35c. Also in Iron & Coal Trades Rev., Aug.2, p. 153; 5500 w*; 35c. Also in Mng. Jnl., Aug. 10, p. 787; 788; 3000 w; 35c.

———. *Supplying Ice Water to Miners in Hot Workings;* [Beneficial results at Butte].—Mining & Engg. World, Oct.12, p. 655; 1000 w; 10c.

———. *The British Coal Dust Experiments; Scheme of Investigation.*—Coll'y Guardn., July26,1912; p. 170; 1800 w; 35c. Also in Iron & Coal Trades Rev., July26, p. 117; 1800 w; 35c.

———. *The Campaign Against Phthisis; IV;* [Discusses report of N. Zealand commission].—S. Afr. Mng. Jnl., July13,1912; p. 732; 1000 w; 35c.

———. *The Framing of the Phthisis Bill;* [S. African].—S. Afr. Mng. Jnl., June 22,1912; p. 607; 1000 w; 35c.

———. *The Health Campaign on Rand Mines;* [Fly-borne diseases].—S. Afr. Mng. Jnl., July27,1912; p. 815; 2500 w; 35c.

———. *The Miners' Phthisis Act;* [Transvaal, No. 19, 1912; principal regulations].—S. Afr. Mng. Jnl., Aug.3,1912; p. 857; 1500 w; 35c.

———. *The Minimum Wage and the Small Colliery;* [Discusses failures].—Coll'y Guardn., July5,1912; p. 27; 2000 w; 35c.

———. *The Motor Car in Rescue Station Work.*—Coal Age, Dec.7,1912; p. 806; 1000 w*; 20c.

———. *The North Staffordshire Rescue Station, Stoke-on-Trent.* — Iron & Coal Trades Rev., Aug.2,1912; p. 161; 750 w; 35c.

———. *The "Proto"—Fleuss-Davis—Breathing Apparatus in Practical Use.*—Iron & Coal Trades Rev., Aug.16,1912; p. 245; 1000 w; 35c.

———. *The Second National Mine-Safety and First-Aid Meet.*—Mining & Engg. World, Oct.5,1912; p. 561; 1000 w; 10c.

———. *The Stone-Dust Method of Preventing Explosions.*—Iron & Coal Trades Rev., Oct.25, p. 682; 1000 w; 35c.

———. *The Taffanel Barrier under Trial;* [Adverse results at Clarence explosion].—Coll'y Guardn., Nov.1, p. 899; 1200 w; 35c.

———. *Versuche über die Zweckmässigkeit blasender oder saugender Luttenbewetterung bei Rettungsarbeiten;* [Tests of the relative usefulness of blowing vs. exhaust air-pipe ventilation in mine rescue work].—Zts. f. Berg-, H.-, & Salinenw., Vol. 60, No. 2; 1912; p. 233; 3000 w*; 90c.

———. *Washing and Drying Accommodations;* [Outlines proposed plans of the departmental committee appointed by the British Home Secretary to investigate miners' baths problem].—Colliery Guardn., May31,1912; p. 1095; 800 w; 30c. Also in Iron & Coal Trades Rev., May31, p. 888; 800 w; 35c.

In Mills and Metallurgy

Andrews, J. B.—*Protection against Occupational Diseases.*—Acad. of Polit. Sci., N. Y., Proc., No. 2, Vol. 2, 1912; pp. 70-75.

Andrews, J. B.—*The Beginnigs of Occupational Disease Reports.*—Amer. Labor Legisl. Rev., Vol. 1, No. 4, 1912; pp. 107-113.

Baly, E. C. C.—*Toxicity of Paints;*

[White Lead].—Soc. of Cheml. Ind'y, Jnl.; June15,1912; p. 515; 3500 w; 65c.

Behrend, —. *Erhöhung der Sicherheit und Leistung moderner Hebezeuge;* [Increasing the safety and output efficiency of modern cranes and lifting devices; Jordan brake].—Dingler's Polytechn. Jnl.; June15,1912; 5 pp*; 50c.

Bencke, A.—*Industrie-Krankheiten und ihre Bekämpfung;* [Industrial diseases and their prevention and treatment].—Gesundheit, No. 1, 1912; p. 169-173; 50c.

Calder, J.—*Scientific Accident Prevention.*—Amer. Labor Legislat. Rev., No. 4, Vol. 1, 1912; pp. 14-24.

Clifford, Jas. O.—*Industrial Lead Poisoning.*—M. & S. P., July6,1912; p. 9; 3500 w; 20c.

Collis, E. L. and J. Hilditch.—*Conditions of Employment in the Manufacture of Tin Plates;* [Brief abstract of British Home Office "White Paper"].—Iron & Coal Trades Rev., Sept.27,1912; p. 464; 1000 w; 35c.

Davies, E. I.—*Safety Inspection in Illinois.*—Amer. Labor Legisl. Rev., No. 4, Vol. 1, 1912; pp. 81-101.

Feeg, O.—*Unfallverhütung und Fabrikshygiene;* [Accident Prevention and Works Hygiene].—Leipzig, 1912; $2 (book).

Gulden, K. R.—*Sind Wismutpräparate giftige Substanzen?* [Are bismuth compounds poisonous materials?].—Heidelberg dissertation, 1912; 35 pp.; $1; (thesis).

Hammond, E. K.—*Safeguards for Power Plant Equipment.*—Power, June18,1912; p. 864; 1500 w*; 15c.

Listauer, A.—*Der persönliche Staubschutz in der Gewerbehygiene;* [Industrial hygiene as regards personal ability of the individual to combat the dust evil].—Deu. Wochenschr. f. Oeffentl. Gesundheitspfl., No. 4, Vol. 43, 1912; pp. 777-783.

Ohmann, O.—*Die Verhütung von Unfällen im chemischen und physikalischen Unterricht;* [Accident prevention in teaching chemistry and physics].—Berlin, 1912; 80 pp.; $1.00 (book).

Quincke, —. *Moderne sozialhygienische Einrichtungen in chemischen Werken;* [Modern hygienic installations in chemical works].—Ver. Deu. Ingr., Zts., Sept.28, p. 1586-1587*; 60c.

Schroeder, N.—*Unfälle in Kalksandsteinfabriken;* [Accidents in sandlime works; read to Ver. Deu. Kalksandsteinfabriken].—Ton Industrie Ztg., Oct.10, p. 1621; 1600 w*; 25c.

Sommerfield, Th. and R. Fischer.—*Industrial Poisons.*—U. S. Bureau of Labor, Bull.; 1912; 20c.

Abstract in Iron & Coal Trades Rev., Aug.16,1912; p. 242; 5500 w; 35c.

Sommerfeld, Th., and R. Fischer.—*Liste der gewerblichen Gifte und anderer gesundheitsschädlicher Stoffe die in der Industrie Verwendung finden;* [List of occupational poisons and other unhygienic compounds which are commonly used in the industries].—Jena,1912; 30 pp.; $1; (pamphlet).

Rambousek, Dr.—*Hygiene in der deutschen Bleifarbenindustrie;* [Hygiene in the German lead pigment works].—Chemiker Ztg., Aug.1,1912; p. 882; 1600 w; 35c.

Young, R. J.—*Practical Safeguards and Means of Preventing Industrial Accidents.*—Amer. Labor Legisl. Rev., No. 4, Vol. 1, 1912; pp. 25-44.

———. *Die Belästigung durch Gase beim Kupolofenbetrieb;* [Incapacitation by gases in cupola practice].—Eisen Ztg., July20, 1912; p. 523; 600 w*; 35c.

———. *Entstaubungsanlagen in Steinkohlenbergwerken;* [Dust catching devices in tipples and breakers and coal-mining plants].—Montanist. Rundschau, June16, 1912; p. 595; 1000 w*; 45c.

———. *Gesundheitsverhältnisse der Arbeiter in preussischen Zementfabriken;* [Sanitary conditions in German Portland cement mills].—Ton Industrie Ztg., Sept.7, 1912; p. 1451; 1800 w; 35c.

———. *Industrial Safety in Steel Works.*—Ind'l Engg., June,1912; p. 439; 1000 w*; 35c.

———. *Oliver Iron Mining Co.'s Shops at Hibbing, Minn.; Safeguarding Equipment to Prevent Accidents.*—Iron Trade Rev., July11,1912; p. 65; 3600 w*; 20c.

———. *Prevention of Plumbism in German Lead Works.*—E. & M. J., Oct.26, p. 785; 159 w; 25c.

———. *Safeguarding the Employes of a Steel Plant;* [Practice at Youngstown Sheet & Tube Co.].—Iron Trades Rev., Oct.17, p. 719; 5500 w*; 20c.

Mine Safety Lamps

See under Lighting.

LABOR; MANAGEMENT; SOCIOLOGICAL

Alms, Dr.—*Die Folgen des deutschen und englischen Bergarbeiterstreiks;* [Results of the coal-miners' strikes in Germany and Gt. Britain, 1912].—Bergbau, June20,1912; p. 349; 3000 w; 35c.

Barbour, P. E.—*Food Supplies for Miners;* [Comparison with U. S. army rations].—E. & M. J., Sept.28,1912; p. 579; 1000 w; table; 25c.

Bernewitz, M. W., von.—*Training of Mine Employes.*—M. & S. P., Sept.14,1912; p. 336; 2400 w; 20c.

Beumer, W.—*Soziale Lager der Bergarbeiter, und Kohle als nationales Erzeugnis;* [The social position of the coal miner, and nationalization of the coal mining industry].—Die Woche, 1912, No. 12; pp. 469-72; 75c.

Bull, R. A.—*Economics of the 8-Hour and 12-Hour Shifts in the Steel Foundry;* [Read to Amer. Foundrym. Asso.; abstract].—Iron Trade Rev., Oct.10, p. 674; 2200 w; 20c.

Bulman, H. F., and R. A. S. Redmayne.—*Colliery Working and Management.*—London, 1912 (3d. edition); 300 pp.*; $2; (book).

Cazalet, P.—*The Position and Prospects of the Young Mining Engineer on the Rand.*—S. Afr. Mng. Jnl., Anniversary No., Sept., 1912; p. 139; 3600 w; $1.

Chase, C. A.—*Principles of Mine Management;* [Lecture under auspices of Colo. School of Mines and Colo. Scient. Soc.].—Colo. School of Mines Mag., Sept.,1912; p. 275; 5000 w; 65c.

Collins, G. A.—*Efficiency-Engineering Applied to Mining.* Amer. Inst. Mng. Engrs., Bull. 69; Sept.,1912; pp. 995-1009*; $1.15.

Crain, G. D., Jr.—*Piece Work System Reduces Expenses;* [in brick industry].—Brick, Oct.1,1912; p. 248; 2500 w*; 20c.

Cullen, Wm.—*A New Aspect of Mining Economics;* [For more favorable treatment of labor on Rand].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 113; 1600 w; $1.

Dunne, A.—*South Yorkshire Coal Field and the Housing Problem.*—Builder, Vol. 103, 1912; pp. 171-172*; 50c.

Eye, C. M.—*Pioneering in the Tropics.*—M. & S. P., Sept.21,1912; p. 370; 3000 w*; 20c.

Feust, Arthur.—*The Chontales Mining District, Nicaragua.*—M. & S. P., Dec.7, 1912; p. 720; 2500 w*; 20c.

Fillunger.—*Der Minimallohn im Bergbau;* [The miner's minimum wage].—Arbeitgeber Ztg. f. Baugewerbe, 1912, No. 10; pp. —*; 50c.

Garrett, W. R.—*The Mine Foreman's Relations to the Company and Men.*—Coal Age, Oct.26, p. 583; 500 w; 20c.

Göhring, H.—*Erfolge und Verluste bei Arbeitskämpfen;* [Annual losses in strikes and lockouts in German metallurgic and machinery industries, 1902-1911].—Centralbl. d. Hütten & Walzwerke, Oct.5, p. 524; 2000 w; 35c.

Good, T.—*The Coal Strike; Its Causes and Consequences;* [British].—Cassier's Mag., June,1912; pp. 533-539; 35c.

Gray, H.—*Food Supply of Miners.*—E. & M. J., Nov.16, p. 921; 500 w; 25c.

Griffiths, David.—*Needed Education in Coal Mining.*—Coal Age, Nov.30,1912; p. 753; 2500 w; 20c.

Griffiths, J. L.—*Minimum Wage Rates for British Miners;* [Summary of the award].—Coal & Coke Op., Aug.15,1912; p. 103; 1000 w; tables; 25c.

Hailwood, E. A.—*Patent Collier's Check or Tally Box.*—Coll'y Guardn., July19,1912; p. 122; 500 w*; 35c.

Harrison, S. M.—*Nine Years of the Anthracite Conciliation Board.*—Surveyor, 1912; No. 3, pp. 143-151; 75c.

Herbig, Dr.—*Bergarbeiterfragen und Bergbau; V: Der Lohn;* [Labor problems in mining; V: the wage question].—Techn. Blätter, Aug.17,1912; p. 257; 4000 w; 45c.

Herbig.—*Ortsübliche Tagelöhne und Bergarbeiterlöhne;* [Comparison of miner's and general daily wage in Germany, past and present].—Techn. Blätter, Oct.12, p. 321; Oct.19, p. 329; 5000 w; tables; 50c.

Heym, W.—*Das englische Mindestlohngesetz;* [The British minimum wage law].—Kali Erz & Kohle, Oct.5, p. 999; 1000 w;

Hoffman. Frederick L.—*Miners' Phthisis on the Rand* (first article).—E. & M. J., Nov.30,1912; p. 1035; 3500 w; 25c.; Dec. 7,1912; p. 1081; 3500 w; 25c.

Hogarth, T.—*How to Deal with the Foreigner.*—Coal Age, Aug.24,1912; p. 247; 600 w; 20c.

Jenkins, W. W.—*Cost of Living in the Union and Rhodesia.*—S. Afr. Mng. Jnl., June1,1912; p. 505; 500 w; tables; 35c.

Jüngst, E.—*Der Ausstand der Ruhrbergarbeiter vom März,* 1912; [Statistics of the strike of German coal miners in the Ruhr district, March,1912].—Glückauf, June29, 1912; p. 1044-1055; 50c.

Kuttner, E.—*Die Polizei im Solde des Grubenkapitals;* [The police as tools of the mining interests in Germany].—Deu. Ind. Beamten Ztg., No. 13, 1912; pp. 133-135; 65c.

Lakes, H.—*Characteristics of the Mexican Miner.*—Mines & Minerals, Aug.,1912; p. 41; 1000 w; 35c.

Lamb, Mark R.—*Who Is a Mining Engineer?*—Mines & Methods, Nov.,1912; p. 55; 2000 w*; 20c.

Lauck, W. J.—*The Iron-Ore Miner of Northern Michigan.*—Coal & Coke Op., Sept.12,1912; p. 165; 3200 w; 25c.

Lawrence, F. E., and others.—*Negro Laborers and How to Handle Them;* [From Ry. Gazt.].—Coal & Coke Op., Oct.10, p. 226; 1600 w; 25c.

Letcher, O.—*The "Square Deal" as Applied in Rand Mining;* [Proper housing of employes].—Mining & Engg. World, Oct.5, 1912; p. 629; 1000 w; 10c.

Lindsay, C. E., F. M. Patterson, and others.—*The Value of Italians as Laborers;* [Views of railroad officials].—Coal & Coke Operator, Aug.29,1912; p. 129; 3400 w; 25c.

Markham, A.—*The Coal Strike;* [British, 1912].—Quarterly Rev., 1912; No. 2; pp. 554-573; $2.

Martell, P.—*Ueber die Arbeiterverhältnisse in Russlands Bergbau und Hüttenindustrie;* [Working conditions in the mining and metallurgic industries in Russia].—Bergwirts. Mittlngn., Aug.,1912; p. 140; 3000 w; 75c.

Massarelli, F.—*La giornata di lavoro nelle industrie a fuoco continuo;* [The working day in industries of continuous operation; iron and steel and smelting; ceramic industries, etc.; report of Italian committee of International Asso. f. Legal Protection of Workmen].—Met. Italiana, June30,1912; pp. 389-397; 50c.

Mathewson, E. P.—*Success from Sticking to the Job;* [Commencement address, Montana School of Mines, June6,1912].—M. & S. P., June22,1912; p. 852; 1600 w; 20c.

MacDonald, R.—*The Minimum Wage and Compulsory Arbitration;* [Read to Brit. Asso. Adv. of Sci., Economic Science section; abstract].—Iron & Coal Trades Rev., Sept.13,1912; p. 384; 1000 w; 35c.

Niebuhr, O.—*Der dritte grosse Bergarbeiter-Streik im Ruhrbecken;* [The 3d great coal-mining strike in the Ruhr district, Prussia; March,1912].—Neue Zeit., 1912, No. 26, p. 934-944; 75c.

O'Toole, E.—*Colliery Yards and Gardens;* [Describes premium system for best-kept yards and gardens at U. S. Coal & Coke Co., Gary, W. Va.].—Coal Age, Aug.10, 1912; p. 201; 500 w; 20c.

Packard, G. A.—*Food Supply for Miners;* [Rations of 10 men and cook for one week, Coronation Island, Alaska].—E. & M. J., June29,1912; p. 1259; 500 w; 25c.

Parker, E. W.—*The Production of Coal in* 1911; [Includes labor statistics].—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 207 pp; 20c.

Purdue, A. H.—*Observations on the Education of Coal-Mine Foremen;* [Address delivered before Soc. of Tennessee Mine Foremen; abstract].—Mg. & Eng. World, Nov. 30,1912; p. 993; 1300 w; 10c.

Rice, C. T.—*Why American Mines Attract Foreign Labor.*—Mining & Engg. World, Oct.26, p. 767; 2300 w; 10c.

Richardson, T., and J. A. Walbank.—*Profits and Wages in the British Coal Trade,* 1898 to 1910.—London, 1912; 96 pp; 75c (book).

Robinson, N.—*West Virginia's Labor Troubles.*—Coal Age, Sept.14,1912; p. 361; 4500 w; 20c.

Rowe, H. E.—*Presidential Address, Chamber of Mines of Victoria;* [Production in 1911; labor; state mining].—Vict. Ch. of Mines, Jnl.; June,1912; p. 200; 7000 w; 45c.

Schumacher, R. W., and J. X. Merriman.—*Homes for White Miners on the Rand;*

Kaffirs and Compounds.—Afr. World, July 20,1912; p. 629; p. 632; 4500 w; 35c.

Schumacher, R. W.—*Housing Rand Miners;* [Proposed plans of City Deep Ltd.].—S. Afr. Mng. Jnl., June1,1912; p. 498; 750 w; 35c.

Schünhoff, F.—*Die Behandlung vertragsbrüchiger Arbeiter;* [The treatment of workmen and labor unions who break their contracts, with special reference to the German brick and ceramic industries].—Ton Industrie Ztg., Oct.22, p. 1672; 1000 w; 35c.

Stange, Dr.—Vereinfachte Wundbehandlung bei Verletzungen im Bergbaubetriebe; [Simplified treatment of wounds from injuries in mining].—Erzbergbau, Dec.1,1912; p. 371; 1500 w; 35c.

Sutton, J.—*The Fireboss as an Assistant Mine Foreman.*—Coal Age, Oct.26, p. 584; 400 w; 20c.

Swift, T. V. K.—*College Men in Underground Operations.*—E. & M. J., Nov.16, p. 921; 1600 w; 25c.

Sylvester, G. E.—*Responsibilities of the Mine Foreman;* [Read to meeting of mine foremen of Tennessee].—Coal & Coke Op., July18,1912; p. 38; 1200 w; 25c.

Taylor, E. C.—*How to Maintain Discipline in a Coal Mine;* [Read to Keystone Mng. Inst., Pittsburgh].—Coal Trade Bull., July1,1912; p. 50; 2000 w; 25c.

Walker, G. B.—*The Coal Strike and After;* [British, 1912].—19th Century, 1912, No. 4; pp. 623-631; 75c.

Weiss, Pierre.—*Researches on Magnetization at Very Low Temperatures.*—Tr. Faraday Soc., Oct.,1912; 3 pp*; 75c.

Wendeborn, B. A.—*Golddiebstähle in den Gruben Siebenbürgens und Massregeln zur Verhütung derselben;* [Gold stealing in Transylvanian mines and methods of prevention]. — Erzbergbau, Sept.15,1912; p. 288; 2700 w; 45c.

Whiteside, F. W.—*Beautifying a Coal Mining Camp;* [Chandler, Colo.].—Coal Age, Oct.19, p. 549; 1000 w*; 20c.

Wiessner, Fr.—*Das Armeekorps der Kohle;* [The German coal miner, his experience, trade inheritance, etc., in their relation to the Lorraine disaster].—Bergbau, Oct.3, p. 562; 1000 w; 35c.

Wiessner, —. *Der Staatsbergbau und die Prämienlohnsysteme;* [Government mining and the premium wage system].—Kattowitz, 1912; 50c (pamphlet).

"A Miner."—*Efficiency Underground.*—E. & M. J., Sept.21,1912; p. 533; 1500 w; 25c.

C. C. S.—*Food Supplies for Miners.*—E. & M. J., July27,1912; p. 148; 500 w; 25c.

International Congress of Miners.—*[Abstract of Papers and Proceedings, Amsterdam, July,* 1912].—Iron & Coal Trades Rev., July12,1912; p. 50; July19, p. 86; 5000 w; 50c. Also in Coal Age, July 27, p. 117, 1000 w; 20c.

"Miner."—*The 8-Hour Day in Mining.*—Canadian Mng. Jnl., Nov.15, p. 766; 2000 w; 25c.

"Miner."—*Personnel in Nigeria.*—Mng. Jnl., Oct.12, p. 1010; 1200 w; 35c.

———. *Child Labor in the Mines.*—Coal Age, Nov.2, p. 613; 1000 w; 20c.

———. *Angriffe der Sozialdemokratishen Presse auf den Kohlenbergbau;* [Attacks of the social democratic press in Germany on the coal mining industry].—Deu. Bergwerks Ztg., July19,1912; p. 1; 1600 w; 35c.

———. *An Up-To-Date Pennsylvania Mining Town;* [United Coal Co. plan whereby workers own their own homes, Boswell].—Black Diamond, Aug.17,1912; p. 18; 1200 w*; 30c.

———. *Awards Under the Coal Mines Minimum Wage Act,* 1912.—Board of Trade Labor Gazt., 1912, No. 5; pp. 166-170; 75c.

———. *Bergarbeiterlöhne im ersten Vierteljahre;* [Wages in Prussian coal mining district, 1st quarter, 1911].—Deu. Bergwerks Ztg., June12,1912; p. 1; tables; 35c. Also in Glückauf, July13, pp. 1126-1129; 50c.

———. *Bituminous Coal Mine Reports.*—Coal Age, Nov.9, p. 639; 1500 w*; 20c.

———. *Company Schools for Mine Employes.*—Coal Age, Sept.7,1912; p. 314; 750 w; 20c.

———. *Die Arbeitszeit in der Grosseisenindustrie;* [Hours of labor and the movement for a maximum working day in the German iron and steel industries].—Centralbl. d. Hütten & Walzwerke, Aug.15, 1912; p. 429; 2000 w; 35c.

———. *Die Erleichterung der menschlichen Handkraftfähigkeit im neuzeitlichen Eisenhüttenbetriebe;* [Eliminating manual labor in iron works; in cokeries, blast furnaces, puddling, and steel plants].—S. W. Deu. Industrie Ztg., Aug.2,1912; p. 377; 5000 w; 50c.

———. *Die sozialen Verhältnisse auf den Bergwerks- und ähnlichen Betrieben in den preussischen Oberbergamtsbezirken;* [Social conditions in the mines and affiliated works in the Prussian mining districts].—Bergbau, June 6, 1912; p. 321; 2000 w; 35c.

———. *Ein Arbeiterbergwerk;* [Miners' co-operative mine; Monthieur colliery, near St. Etienne, France, and its failure].—Montan Ztg., July1,1912; p. 242; 1000 w; 35c.

———. *Federated Districts of England and North Wales; Changes in Rate of Wages,* 1888 *to* 1912.—Coll'y Guardn., Oct. 25, p. 849; 1500 w*; 35c.

———. *Foreign Labor in Mines;* [in Western Australia].—W. A. Mng., etc., Jnl., Aug.10,1912; p. 10; 1000 w; 35c.

———. *Frick Coke Co.'s Welfare Work.*—Coal Age, Oct.5,1912; p. 470; 1200 w*; 20c.

———. *Gardens and Playgrounds in Mining Towns.*—Coal Age, Sept.7,1912; p. 336; 800 w*; 20c.

———. *Health and Living Conditions on Rand Mines.*—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 330; 2700 w*; $1.

———. *Hours of Employment of Winding Enginemen;* [British draft regulations].—Coll'y Guardn., Sept.13,1912; p. 530; 1200 w; 35c. Also in Iron & Coal Trades Rev., Sept.13, p. 385; 1200 w; 35c.

———. *Housing of Scottish Miners.*—Coll'y Guardn., June14,1912; p. 1190; 1500 w; 35c.

———. *Increasing Economy Among Mining Employes;* [by instituting mining company savings banks].—Mining & Engg. World, Oct.19, p. 701; 1000 w; 10c.

———. *Inspection at Beaver Cons.;* [Cobalt, Ont.; inspection twice daily, with suggestions for safety].—E. & M. J., Aug. 17,1912; p. 318; 1200 w*; 25c.

———. *Insurance of German Miners.*—Coll'y Guardn., Nov.8, p. 937; 2000 w; 35c.

———. *Labor Agreements, Guarantees and Penalties.*—Engnrg., June14,1912; p. 809; 1500 w; 35c.

———. *Labor Struggle in West Vir-*

ginia.—Coal & Coke Op., Sept.5,1912; p. 145; 4000 w; 25c.

———. *Labor Supply on the Rand.*—Mng. Mag., June,1912; p. 409; 1500 w; tables; 35c.

———. *La durée du travail dans les mines de fer;* [The 8-hour day in the iron mines of the Nancy district, France].—Echo d. Mines, Aug.15,1912; p. 902; 500 w; 35c.

———. *Living Conditions of Rand Miners.*—S. Afr. Mng. Jnl., Aug.3,1912; p. 951; 2000 w*; 35c.

———. *Manifold Duties and Rseponsibilities of Mine Foremen.*—Coal & Coke Op., Nov.7, p. 289; 2000 w; 25c.

———. *Martial Law Is Declared in West Virginia;* [Strike developments in Clear Creek and Paint Creek districts].—Coal Trade Bull., Sept.16,1912; p. 25; p. 55; 2100 w; 25c.

———. *Miners' Wages* [in U. S.; abstract of Census report].—E. & M. J., Oct. 26, p. 778; 400 w; 25c.

———. *Miners' Wages in Western Australia;* [Conflict between miners and Chamber of Mines].—Australian Mng. Standd., Oct.17, p. 363; 800 w; 35c.

———. *Minimum Age for Employment of Boys in Mines;* [Discussion].—Coal Mng. Inst. of Amer., Proc. for 1911; 1912; pp. 203-213.

———. *Minimum Wage Awards;* [Rates and local regulations in the various British districts as determined under the act of 1912].—Coll'y Guardn., May17,1912; p. 999; May24, p. 1038; May31, p. 1048; 10000 w; 65c.

———. *Native Living Conditions on the Rand.*—S. Afr. Mng. Jnl., Oct.12, p. 171; 800 w; 35c.

———. *People Employed in the Mining Industries;* [U. S. Census returns].—Mining & Engg. World, Oct.26, p. 749; 500 w; 10c.

———. *Preussens im 1. Vierteljahre 1912 verdienten Bergarbeiterlöhne;* [Statistics of miners' wages in Prussia, 1st quarter of 1912].—Zts. f. Berg-, H.-, & Salinenw., Vol. 60, No. 2; 1912; pp. 110-111; 90c.

———. *Preussische Knappschaftsgesetz;* [The Prussian laws on labor and trade unions; the miners' union].—Preuss. Gesetzsammlungen; 1912; No. 16.

———. *Profit-Sharing and Co-Partnership;* [from "Labour Gazette"].—Iron & Coal Trades Rev., July19,1912; p. 92; 2000 w; 35c.

———. *Proposed Workmen's Compensation Act for Pennsylvania.*—Coal Tr. Bull., Dec.2,1912; p. 30; 5000 w; 25c.

———. *Rand Miners and Labor Methods;* [Discusses absence of responsibility on the part of labor unions in arbitration cases].—S. Afr. Mng. Jnl., Sept.28, p. 99; 1000 w; 35c.

———. *Rand Miners and the New Contract Agreement;* [Wages vs. contract system],—Afr. World, July27,1912; p. 697; 2000 w; 35c.

———. *Reforming Living Conditions on the Mines;* [Transvaal].—S. Afr. Mng. Jnl., June29,1912; p. 643; 1200 w; 35c.

———. *Regelung der Lohnzahlung beim Bergbau;* [Regulation of payment of miners' wages; Austrian law of June 5, 1912].—Zentral Verbd. Bergbau Betriebsl. Oestr., Zts., June15,1912; p. 369-370; 1000 w; 35c.

———. *Some Economic Aspects of the Minimum Wage Awards;* [Editorial discussion].—Iron & Coal Trades Rev., July 26,1912; p. 134; 2000 w; 35c.

———. *Statistik der Knappschaftsvereine des preussischen Staates,* 1910; [Statistics of miners' unions and co-operative insurance societies in Prussia in 1910; pension and invalid disbursements].—Zts. f. d. Berg-, H-, & Salinenw., 1912, No. 3 (Statistical); 64 pp.; 75c.

———. *Statistische Mitteilungen über die im Jahre* 1911 *Arbeitslöhne;* [Statistics of miners' wages in Prussia in 1911].—Zts. f. Berg-, H.-, & Salinenw., Vol. 60, Statistical No. 1; pp. 29-46; 90c.

———. *Statistique des industries extractives at métallurgiques en Belgique,* 1911; [Statistics of mining and metallurgic production, wages, labor, etc., in Belgium, 1911].—Annales d. Mines (Belgiq., Vol. 17, No. 4; 1912; pp. 989-1088; 65c.

———. *Strikes and Lockouts in Belgium from* 1906-1910.—Engnrg., June14, 1912; p. 810; 2000 w; 35c.

———. *Text of New ..age Scale for District No. 21, or Oklahoma.*—Coal Trade Bull., Sept.16,1912; p. 55; 1500 w; 25c.

———. *Text of New Agreement for Union Mines in Wyoming for Period of Two Years.*—Coal Trade Bull., Sept.16, 1912; p. 27; 5000 w; 25c.

———. *The Bingham, Utah, Strike.*—E. & M. J., Oct.26, p. 775; 300 w; 25c.

———. *The Case Against the Contract System;* [From report of N. Zealand commission].—S. Afr. Mng. Jnl., July13,1912; p. 741; 2000 w; 35c.

———. *The Coal Mine Superintendent's Duty.*—Mines & Minerals, Aug.,1912; p. 6; 1800 w; 35c.

———. *The 8-Hour Day;* [Proposed installation in Ontario mines].—Canadian Mng. Jnl., Oct.1,1912; p. 665; 1000 w; 25c.

———. *The Housing Question.*—Coll'y Guardn., Sept.20,1912; p. 595; 3000 w; 35c.

———. *The Making of Mine Managers.*—Australian Mng. Standd., Aug.8,1912; p. 123; 1200 w; 35c.

———. *The Miners' New Contract Form;* [Witwatersrand].—S. Afr. Mng. Jnl., Aug. 24,1912; p. 955; 1300 w; 35c.

———. *The Minimum Wage;* [History in New Zealand mining industry].—Slate Trade Gazt., July15,1912; p. 109; 1300 w; 35c.

———. *The Minimum Wage;* [Editorial on working of the new British scales].—Coll'y Guardn., Aug.16,1912; p. 343; 2500 w; 35c.

———. *The Minimum Wage;* [Summary of rates awarded and demanded].—Coll'y Gunardn., May31,1912; p. 1095; 1200 w; 30c.

———. *The New College Graduate and His Employment.*—Mining & Engg. World, Sept.21,1912; p. 519; 1000 w; 10c.

———. *The New Payment System on the Rand Mines;* [For underground contract work].—S. Afr. Mng. Jnl., July13,1912; p. 727; p. 731; 2500 w; 35c.

———. *The Paint Creek Situation; Review from the Operator's Standpoint.*—W. Va. Mng. Asso., Publication; 1912; 6 pp.; 2000 w; 50c.

———. *The Payment of Rand Miners.*—S. Afr. Mng. Jnl., Aug.3,1912; p. 844; 750 w; 35c.

———. *The Scarcity and Inefficiency of Miners;* [on the Rand].—S. Afr. Mng. Jnl., July13,1912; p. 728; 800 w; 35c.

———. *The Strike at Bingham, Utah.*—

Mines & Methods, Sept.,1912; p. 1; 1000 w; 25c.

———. *The Wages of the South African Mining Industry.*—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 249; tables, $1.

———. *The Working of the Minimum Wage Act.*—Iron & Coal Trades Rev., Aug. 16,1912; p. 238; Aug.23, p. 284; 4000 w; 50c.

———. *Travail des enfants et des femmes dans les mines, minières et carrières;* [Employment of child and female labor in the mines, pits and quarries of France; report of commission to the President].—Ann. d. Mines (Paris), Dec.,1912; pp. 796-806; 75c.

———. *Tumped-Up Issues Used by the Miners' Union;* [Labor difficulties in W. Virginia coal fields].—Black Diamond, Sept.15,1912; p. 20; 3500 w*; 30c.

———. *Uebersicht über die in den Haupt-Steinkohlenbezirken Preussens,* 1888-1911 *auf* 1 *Arbeiter und auf* 1 *Schicht erzielte Förderung;* [Statistics of output per man per shift in the leading coalfields of Prussia, 1888-1911].—Zts. f. d. Berg-, H.-, & Salinenw., Vol. 60, Statistical No. 1; pp. 46-48; 90c.

———. *Wages at Kalgoorlie* (W. Aust.).—W. A. Mg., B. & Eng. Jnl., Oct.19,1912; p. 3; 3600 w; 35c.

———. *Wages Ruling in Queensland Mines, Mills, and Metallurgical Works;* [Wage scales for various positions].—Queensl. Govt. Mng. Jnl., Aug.,1912; p. 383; 1000 w; tables; 35c.

———. *Waihi, N. Z., Strike.*—W. Australian Chamber of Mines, Jnl.; Aug.,1912; p. 181; 2000 w; 65c.

———. *Wohlfahrteinrichtungen und Arbeitverhältnisse in der Kaliindustrie;* [Welfare work and labor conditions in the German potash industry].—Deu. Bergwerks Ztg., Aug.1,1912; p. 1; 2000 w; 35c.

Training School for Employes

See under "Educational."

Workmen's Compensation, Etc.

Andrews, J. B.—*Protection against Occupational Diseases.*—Acad. of Polit. Sci., N. Y., Proc., No. 2, Vol. 2, 1912; pp. 70-75.

Clarke, O.—*The National Insurance Act;* [British].—London, 1911; 490 pp.; $4; (book).

Clifford, J. O.—*Laws Governing Employers' Liability.*—Mines & Methods, Sept., 1912; p. 16; 5500 w; 25c.

Dawson, M. M.—*Provision against the Consequences of Industrial Accidents.*—Acad. of Polit. Sci., N. Y., Proc., No. 2, Vol. 2, 1912; pp. 112-119.

Dinsmoor, A.—*Workmen's Accident Compensation;* [Brief resumé in Illinois].—Coal Age, June29,1912; p. 1244; 1800 w; 20c.

Flieder, K.—*Schadenersatzanspruch der von Betriebsunfällen betroffenen Brüderlademitglieder gegen den Betriebsunternehmer;* [The claims for accident indemnification of brotherhood members against mine owners under the newly proposed Austrian workmen's insurance-compensation law].—Oestr. Zts. f. Berg- & H-wesen, Apr.20, 1912; p. 213; Apr.27, p. 230; May4, p. 245; 7000 w; 95c.

Foley, F. S.—*The National Insurance Act,* 1911, *as it Affects Employers and Workmen.*—London, 1912; 62 pp.; 75c. (book).

Graf, —. *Das neue Arbeiterversicherungsgesetz in England;* [The new British invalid, sickness and unemployment insurance laws].—Technik & Wirtschaft, July,1912; pp. 451-462*; 75c.

Hohn, F.—*Regierungsentwurf des Gesetzes betreffend die Bergarbeiterbruderladen;* [Draft of the Austrian government bill affecting miners' unions and workmen's compensation and insurance].—Oestr. Zts. f. Berg- & H-wesen, Apr.6,1912; p. 190; Apr. 13, p. 206; 5000 w; 65c.

Hutton, M. S.—*Workmen's Compensation in Europe and America;* [Synopsis of European legislation and results].—Engg. Mag., July,1912; pp. 577-587; 35c.

Law, F. E.—*Workmen's Compensation for Accidents;* [Discusses measures suitable for U. S.].—Amer. Industries, June, 1912; 1000 w; 35c.

Mansch, A.—*Die Arbeitslosenversicherung in England;* [Unemployment insurance in England].—Centralbl. d. Hütten & Walzwerke, July15,1912; p. 369; 2000 w; 35c.

Seelman, H.—*Die Reichsversicherung;* [Popular description of the German Imperial Insurance laws; sickness, invalidism, dependents, accident, and workmen's insurance].—Leipzig, 1912; 121 pp.; $1 (book).

———. *Accidents and Compensation on the Rand;* [New insurance policy].—S. Afr. Mng. Jnl., July20,1912; p. 775; 1200 w; 35c.

———. *Gesetz von* 3 *Juni,* 1912; *Abänderung* 7 *Titel im Allgm. Berggesetze;* [Prussian law of June 3, 1912, amending chapter 7 of the general mining law of 1865-1906, affecting miners' unions, payment of sickness and other insurance, etc.].—Zts. f. Bergrecht, Vol 53, No. 3, 1912; pp. 287-327; 75c.

———. *Should the Coal Mining Industry Be Subject to an Employers' Liability or a Workmen's Compensation Act?* [Discussion].—Coal Mng. Inst. of Amer., Proc. for 1911; 1912; pp. 195-202.

———. *The Miners' Phthisis Act;* [Transvaal, No. 19, 1912; principal regulations].—S. Afr. Mng. Jnl., Aug.3,1912; p. 857; 1500 w; 35c.

———. *The Ohio Workmen's Compensation Law.*—Iron Age, July18,1912; p. 130; 1500 w; 30c.

———. *Unemployment Insurance and the Coal Trades;* [Attitude of British National Insurance Act toward coal mining].—Coll'y Guardn., Aug.2,1912; p. 235; 1000 w; 35c.

———. *Unemployment Insurance;* [Recent decisions under the British act].—Coll'y Guardn., Aug.30,1912; p. 431; 1200 w; 35c.

ACCOUNTS; BOOKKEEPING

Blau, E.—*Selbsttätige Wiegevorrichtung zur Ermittlung des Wageninhaltgewichts;* [Automatic weighing plant for determining weight of car contents].—Glückauf, Junel, 1912; p. 871; 1500 w*; 50c.

Charlton, W. H.—*Insurance on Mine Property.*—E. & M. J., Aug.31,1912; p. 391; 1200 w; 25c.

Chase, C. A.—*Advantages of System in the Keeping of Mine Accounts;* [Lecture at Idaho Springs under auspices of Colo. School of Mines and Colo. Scient. Soc.].—Mng. Sci., Sept.19,1912; p. 184; 1600 w; 20c.

Denny, G. A.—*Ore Valuation;* [Rand

methods and liability to over-valuation].—S. Afr. Mng. Jnl., Anniversary No., Sept., 1912; p. 45; 4000 w*; $1.

Emmons, N. H.—*A Concise Method of Showing Ore Reserves.*—Amer. Inst. Mng. Engrs., Bull. 66, June,1912; pp. 603-610*; $1.15.

Hailwood, E. A.—*Patent Collier's Check or Tally Box.*—Coll'y Guardn., July19,1912; p. 122; 500 w*; 35c.

Hoover, H. C.—*Mine Valuation and Mine Finance;* [Redemption of capital; debentures vs. shares].—Mng. Mag., Oct., p. 275; 2200 w; 45c.

Jennings, S. J.—*Metallurgical Bookkeeping.*—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 33; 700 w; $1.

Lewin, C. M.—*Abschreibungsfrage in Hütten- und Walzwerken;* [The question of writing off funds for repairs and renovations in smelters and rolling mills].—Centralbl. d. Hütten & Walzwerke, Aug.15,1912; p. 430; 3000 w; 35c.

MacCoy, F.—*The Keeping and Filing of Cost Data.*—Mex. Mng. Jnl., Nov.,1912; p. 17; 1000 w; 35c.

McDill, R. D.—*A Uniform System of Material Cost Keeping.*—Engg. & Contractg., Sept.4,1912; p. 279; 1000 w; table; 20c.

McNeill, J. C.—*Quick Action on Pay-Rolls;* [Combination miner's ledger, employe's statement and receipt and paycheck].—Coal Age, Sept.21,1912; p. 388; 1000 w*; 25c.

Pfening, H. F.—*Mine Equipment, Repairs and Supplies;* [Order blanks, time tags, etc.].—Coal Age, Oct.5, p. 453; 1000 w*; 20c.

Simpson, T. V., and G. W. Bell.—*A Photographic Method of Rapidly Copying Out Pay-Notes, in Use at Throckley Collieries;* [Read to N. of England Inst. of Mng. & Mechl. Engrs.; abstract].—Coll'y Guardn., Oct.25, p. 841; 8000 w; 35c.

Smith, G. H.—*System of Keeping Underground Costs and Records.*—Chemi. Met. & Mng. Soc. of S. Afr., Jnl.; May,1912; pp. —; 90c. Abstract in S. Afr. Mng. Jnl., May25, p. 469; 4000 w: 35c.

Tait, G. W.—*Gold Mine Accounts and Costing.*—London,1912; $2 (book).

———. *An Automatic Continuous Recorder of the Weight of Material on Belt and Bucket Conveyors, Cable Railways, etc.* —Met. & Chemi. Engg., Sept.,1912; p. 562; 1300 w*; 35c.

———. *Bituminous Coal Mine Reports.* —Coal Age, Nov.9, p. 639; 1500 w*; 20c.

———. *Increasing Economy Among Mining Employes;* [by instituting mining company savings banks].—Mining & Engg. World, Oct.19, p. 701; 1000 w; 10c.

———. *Keeping Costs in Quarry Work.* —Stone Trades Jnl., July,1912; p. 25; 1800 w; 35c.

———. *Phantom Profits;* [Laxity in keeping of cost and profit accounts].—Mng. Mag., July,1912; p. 20; 1200 w; 35c.

———. *Some Mine Accountancy Problems;* [Fallacy of wiping out capital expenditures].—S. Afr. Mng. Jnl., Sept.21, p. 77; 2000 w; 35c.

HYDRAULIC MINING; POWER SHOVELS

Dredging

Bansen, Hans (Editor).—*Die Bergwerksmaschinen, II: Gewinnungsmaschinen;* [Mine Machinery; Vol. II: Mining Machinery; by A. Gerke, L. Norwegen, O. Pütz, and K. Teiwes; devoted to dredges, power shovels, stripping machines; hydraulic monitors and elevators; compressors; drills, coal-cutters, and tunneling machines; wedging; electric blasting].—Berlin, 1912; 474 pp; 393 figs; $5.50 (book).

Barbour, P. E.—*A California Dry Placer "Dredge."*—E. & M. J., Oct.12, p. 687; 500 w*; 25c.

Bennett, J. C.—*Costs of Levelling Dredged Ground at Oroville, Cal., with an Electric Drag Bucket-Scraper.*—Engg. News, Oct.17, p. 699; 1000 w*; 25c. Also in E. & M. J., Oct.26, p. 782; 800 w*; 25c.

Berridge, H.—*Formulas and Constants for Friction Loss in Dredge Discharge Pipes.*—Engg. News, July18,1912; p. 117; 600 w*; 25c.

Bixby, Gen. W. H.—*Costs of Dredging* 20,000,000 *Cu. Yards of Material in* 1911, *with* 39 *Hydraulic Pipe Line Dredges;* [From U. S. Army engineers' reports].—Engg. & Contractg., Oct.9,1912; p. 402; 6000 w; tables; 20c.; Oct.16,1912; p. 427; 6500 w; tables; 20c.

Bixby, W. H.—*Cost of Excavating* 4,151,-000 *cu. yds. of Material with* 51 *Dipper and Bucket Dredges in* 1911; [Abstract from U. S. Army Engrs. report].—Engg. & Contractg., Oct.16,1912; p. 427; 6500 w; tables; 20c.

Chartran, Rob.—*Du dragage des alluvions aurifères en California;* [The gold dredging industry of California].—Echo d. Mines, June13,1912; p. 698; 1500 w; 35c.

Dick, J. E.—*Churn-Drill Examination of Placers.*—See under Prospecting.

Eddy, L. H.—*Dredging on Butte Creek, California.*—E. & M. J., Nov.16, p. 935; 5000 w*; 25c.

Eddy, Lewis H.—*Righting the Calaveras Dredge, Calif.*—E. & M. J., Nov.30,1912; p. 1019; 1250 w*; 25c.

Eddy, L. H.—*The Union Dredge at Folsom, Calif.*—E. & M. J., Aug.10,1912; p. 261; 1000 w*; 25c.

Eddy, L. H.—*Recovering Burned Dredge Machinery;* [Natomas No. 8 dredge, American river, Cal., burned Oct.29,1911].—E. & M. J., July13,1912; p. 67; 1800 w; 25c.

Eddy, L. H.—*The Magpie Dredge, Montana.*—E. & M. J., Aug.24,1912; p. 355; 3200 w*; 25c.

Eddy, L. H.—*Launching a Steel Dredge Hull;* [Natoma field, Cal.].—E. & M. J., Sept.28,1912; p. 595; 1200 w*; 25c.

Fawns, S.—*Tin.*—See under Tin.

Holm, —. *The Danish Suction Dredge Graadyb.*—Internatnl. Marine Eng., May, 1912; 4 pp*; 45c.

Horváth, L.—*Goldwaschung aus der Mur;* [Gold dredging possibilities and costs in the Maros and Sztrigy rivers and elsewhere in Austria-Hungary].—Montan Ztg., Aug.15, 1912; p. 302; 1500 w; 45c.

Janin, Chas.—*Gold Dredging on the Seward Peninsula, Alaska.*—M. & S. P., Sept. 28,1912; p. 394; 3600 w*; 20c.

Johnson, R. D. O.—*Native Placer Mining in Colombia.*—E. & M. J., Oct.19, p. 741; 4000 w*; 25c.

Lakes, Arthur.—*Early Day Operations of Shallow Placer Deposits.*—Mg. Science, Nov.21,1912; p. 329; 1500 w*; 15c.

Lakes, A.—*Gold Dredging up to Date;* [Reviews modern developments and practice in Cal., Mont., Colo., Alaska, B. C.; Phil. I'ds., Russia, N. Z., S. America].—

Mines & Minerals, July,1912; p. 725; 5000 w*; 35c; Aug.,1912; p. 53; 2700 w*; 35c.

Lakes, A., Sr.—*Neglected Gold Dredging Opportunities of the West;* [Possibilities in Rocky Mountain states].—Mng. Sci., Aug.22, 1912; p. 116; 2700 w; 20c.

Lawrence, S. E.—*Methods and Cost of Repairing Dredge Parts in the Field, by Thermit and Oxy-Acetylene Welding;* [From U. S. Army "Professional Memoirs"].—Engg. & Contractg., July17,1912; p. 60; 1000 w; 20c.

Leggett, J. H.—*Reclaiming Dredged Land.* —M. & S. P., Oct.26, p. 527; 1000 w*; 20c.

Lof.—*Electric Mining Applications.*—See under Electricity.

Martin, A. H.—*Pump-Dredging Small Gravel Deposits for Gold.*—Mg. & Eng. World, Nov.16,1912; p. 912; 1400 w; 10c.

Martin, A. H.—*Extracting Gold from Gravel Deposits.*—Mines & Methods, Nov., 1912; p. 53; 3000 w; 20c.

Martin, Al. H.—*California Gold Dredging Industry.*—Mines & Methods, June,1912; p. 501; 3500 w*; 25c.

Martin, Al. H.—*Economic Mining of Low-Grade Gravel, California;* [Elevator system and pump-dredge].—Mining & Engg. World, July13,1912; p. 61; 1600 w; 10c.

Miles, J. H.—*Gold Dredging in the Boise Basin, Idaho.*—M. & S. P., Sept.14,1912; p. 330; 1800 w*; 20c.

Muller van Brakel, —. *Small Suction Dredger Used in the Dutch Shell Lime Industry.*—Internatnl. Marine Eng., May,1912; 2 pp*; 45c.

Paulmann and Blaum.—*Neure Baggerkonstruktionen;* [Innovations in dredge construction].—Ver. Deu. Ingr., Zts., Oct. 19, pp. 1685-1689*; 75c.

Paulmann, M. and R. Blaum.—*Die Nassbagger und die Baggereihilfsgeräte;* [Wet-process power shovels, and power-shovel accessories].—Berlin, 1912; $6.50 (book).

Reece, T.—*Loss of Gold in Dredging Operations in Russia.*—Mining & Engg. World, Oct.5,1912; p. 628; 2000 w; 10c.

Rindlund, —. *Notes on Hydraulic Dredge Design.*—Internatnl. Marine Eng., May, 1912; 4 pp*; 50c.

Schneider, B.—*Borsig Mammut Bagger;* [The Borsig "Mammoth" air-driven dredge for slimes and fine materials].—Internatnl. Mng. Jnl., Sept.,1912; p. 109; 2500 w*; 45c.

Schonberg, A. C.—*Efficiency;* [American vs. British, in gold dredging].—M. & S. P., Oct., p. 295; 2200 w*; 45c.

Sellars, D. B.—*Sluicing and Dredging;* [Abstract of Victoria Mines Dept. report for 1911].—Vict. Chamber Mines, Monthly Mng. Report; April,1912; p. 161; 500 w; 45c.

Abstract in Australian Mng. Standd., May23,1912; p. 477; 500 w; 35c.

Smith, P. S.—*Notes on Mining in Seward Peninsula, Alaska.*—U. S. Geol. Survey, Bull. 520-M; 1912; 10 pp; 10c.

Extract, List of Dredges and Dredging Statistics, 1911: in E. & M. J., July27, 1912; p. 162; tables; 25c.

Sperry, Edwin A. — *Investigation of Feather River Black Sands;* [near Marysville, Cal.].—M. & S. P., Nov.16, p. 624; 2800 w*; 20c.

Springer, J. F.—*The Suction Dredge at Panama.*—Mex. Mng. Jnl., Aug.,1912; p. 30; 3000 w*; 25c.

Tyssowski, J., J. P. Hutchins, and others.—*Gold Dredging in 1911;* [Alaska, Cal., Ga., Idaho, Mont., Nev., S. Dak., Australia, N. S. Wales, N. Z., Bolivia, Colombia Philippines Russia].—Mineral Industry, Vol. 20, 1912; pp. 782-805.

Waters, C. H.—*Prospecting Drill Records;* [Drill records in dredging gravels to show values, gravel character, bed-rock contour, and water levels].—M. & S. P., June15,1912; p. 833; 500 w*; 20c.

M. S. I.—*Exploitation des alluvions métallifères;* [The working of alluvial gold deposits].—Rev. Industrielle du Centre, Oct.26, p. 9; 1200 w; 35c.

———. *Briseis Co., Tasmania;* [Abstract from 1911 report on costs of tin sluicing and gold dredging].—E. & M. J., July20,1912; p. 113; 300 w; tables; 25c.

———. *Compressed-Air Device for Dumping Dredge Bucket.*—Compr. Air Mag., Nov.,1912; p. 6618; 500 w*; 25c.

———. *Cost of Dredging* 32,000,000 *Cu. Yds. of Material with Sea-Going Government Dredges in* 1911].—Engg. & Contractg., Sept.25,1912; p. 340; 3100 w; 20c.

———. *Dredging in Colombia.*—M. & S. P., Oct.12, p. 471; 500 w*; 20c.

———. *Dredging in New South Wales.* —Mng. World (London), July13,1912; p. 51; 500 w; 35c. Review of report for 1911 in Mng. Mag., July, p. 52; 400 w; tables; 45c.

———. *Dredges Operated by Oil Engines.*—Engg. News, Sept.12,1912; p. 468; 1800 w*; 25c.

———. *Dredging Plants Owned and Operated by the Engr. Dept. at Large, U. S. Army, Fiscal Year Ending June* 30, 1911; *Class C, Bucket and Dipper Dredges;* [From annual report].—Engg. News, Sept.5,1912; p. 440; 1000 w; tables; 25c.

———. *Feathering Paddle Wheels for U. S. Self-Propelling Hydraulic Dredges on Arkansas River.*—Engg. News, Aug.15,1912; p. 286; 1600 w*; 25c.

———. *Gold Mining in the Philippines.*— M. & S. P., Oct.12, p. 462; 400 w; 20c.

———. *Some Data on the Dredging of Bars in the Columbia River.*—Engg. & Contractg., Aug.21,1912; p. 204; 1000 w; 20c.

———. *The Inmachuck Dredging Co.'s Dredge in Alaska.*—Mg. & Eng. World, Dec. 7,1912; p. 1039; 250 w*; 10c.

———. *Ueber die alluvialen Goldwäschereien in Ungarn im letzen Jahrzehnt;* [The alluvial gold washings in Hungary and Transylvania in the last decade]. —Montan. Ztg., Oct.15, p. 392; Nov.1, p. —; 7000 w; 50c.

———. *U. S. Government Contract Dredging.*—Engg. News, July11,1912; pp. 52-56; 5000 w; tables of prices, etc., 25c.

———. *Victorian Dredging;* [Abstract of report for 1911].—Mng. Jnl., July13, 1912; p. 696; 1000 w; 35c.

Sluicing; Hydraulicking

See also Hydro-Electric Plants for flumes, sluices, etc.

Bansen, H. (Editor).—*Mine Machinery, Vol. II: Mining Machinery* [in German].— See under Dredging.

Barr, John Allen.—*Florida Phosphate Practice.*—M. & M., Dec.,1912; p. 265; 5000 w*; 35c.

Colvin, F. H.—*Hydraulic Excavation at Panama.*—Power, Sept.24,1912; p. 442; 500 w*; 15c.

Edwards, W. W.—*Stacking Hydraulic Tailing;* [Novel use of monitors in Pine

Creek hydraulic mines, Atlin, B. C.].—M. & S. P., Aug.24,1912; p. 243; 500 w*; 20c.

Etcheverry, B. A.—*The Design of a Reinforced Concrete Flume.*—Jnl. of El'y, Power & Gas, Oct.19, p. 338; 1600 w*; 35c.

Fawns, S.—*Tin.*—See under Tin.

Hoskins, A. J.—*Gulch Mining in Gilpin County, Colo.;* [Reworking old placers by hand].—Mines & Minerals, Nov., p. 223; 1600 w*; 35c.

Immerschitt, Engineer.—*Die Verwendung von Druckwasser zur Hereingewinnung von Kohle;* [The application of water under pressure to the mining of coal].—Berg- u. Hüttenmännische Rundschau, Nov.20,1912, p. 40; 3800 w*; 25 cts.

Johnson, R. D. O.—*Native Placer Mining in Colombia.*—E. & M. J., Oct.19, p. 741; 4000 w*; 25c.

Kennedy, H. J.—*Wood-Stave Pipe Distribution.*—Jnl. of El'y Power & Gas, Nov. 9, p. 401; 1200 w*; 30c.

Macnamara, J. C., and H. E. Fern.—*Alluvial Mining on Goss Moor, Cornwall.*—Mng. Mag., July,1912; p. 46; 2000 w*; 45c.

Martin, A. H.—*Hydraulic Elevators in Placer Mining.*—E. & M. J., Nov.16, p. 929; 1200 w; 25c.

Martin, Al. H.—*Economic Mining of Low-Grade Gravel, California;* [Elevator system and pump-dredge].—Mining & Engg. World, July13,1912; p. 61; 1600 w; 10c.

Megraw, H. A.—*Hydraulic Surface Exploration;* [Washing off surface covering to expose bed rock at Cobalt, Ont.].—E. & M. J., Oct.5,1912; p. 635; 500 w*; 25c.

Moline, A. H. P.—*Sluicing for Tin; the Y. Water Co., Ltd.;* [at Emmaville, N. S. W.].—Mng. & Engg. Rev., Oct., p. 9; 500 w*; 35c.

Moore, W. A.—*Electricity in Alluvial Tin Working.*—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 117; 1500 w*; $1.

Palmer, LeRoy A.—*Low Costs at the Wasp No. 2 Mine, So. Dakota.*—M. & M., Dec.,1912; p. 281; 2500 w*; 35c.

Payne, Henry Mace.—*Hydraulicking Frozen Gravels in Yukon.*—E. & M. J., Nov.30, 1912; p. 1038; 400 w; 25c.

Percival, J. B.—*Placer Mining Conditions in Dutch Guiana.*—Mining & Engg. World, Oct.5,1912; p. 623; 1600 w*; 10c.

Porter, E. A., and C. E. Ellsworth.—*Mining and Water Supply of 40-Mile, 70-Mile, Circle and Fairbanks Districts, Alaska, in 1911.*—U. S. Geol. Survey, Bull. 520-H; 1912; pp. 63*; 10c.

Rollandet, G. J.—*A Caisson System of Placer Mining Under Water;* [Williamson system].—Mng. Sci., Aug.1,1912; p. 68; 1000 w*; 20c.

Watson, G. L.—*The 48-in. Continuous Wood-Stave Main, Absecon Station to Atlantic City, New Jersey.*—Amer. Soc. of Engg. Contractors, Jnl.; Sept.,1912; pp. 301-356*; 35c.

Worrell, M. L.—*Construction Methods Employed in Laying Submerged Water Mains Across Three Rivers in Georgia and Mississippi;* [Read to Amer. Water Works Asso.].—Engg. & Contractg., June19,1912; p. 700; 2000 w*; 20c.

M. S. I.—*Exploitation des alluvions métallifères;* [The working of alluvial gold deposits].—Rev. Industrielle du Centre, Oct.26, p. 9; 1200 w; 35c.

"F. N. T."—*Pipes for Conveying Water under Pressure;* [Formulae]. — Mechl. World, Aug.16,1912; p. 79; 1000 w*; 35c.

———. *Briseis;* [Report for 1911].—Australian Mng. Standard, July4,1912; p 5; 3000 w; 35c.

———. *Briseis Co., Tasmania;* [Abstract from 1911 annual report on output and costs of tin sluicing].—E. & M. J., July 20,1912; p. 113; 300 w; 25c.

———. *Calabashing;* [Tin panning practice in West African streams, using calabash gourd].—Mng. Mag., July,1912; p. 23; 1000 w*; 35c.

———. *Concrete Flume and Culverts, Los Angeles Aqueduct.*—Engg. Record, June22,1912; p. 698; 750 w*; 25c.

———. *Hydraulic Mining in Bauce County, Quebec.*—Canadian Mng. Jnl., Aug. 1,1912; p. 519; 800 w*; 25c.

———. *Mining in the Stanthorpe District;* [Rover tin mines and sluicing].—Queensland Govt. Mng. Jnl., Aug.,1912; p. 370; 1500 w*; 35c.

———. *Quesnelle Hydraulic Gold Mng. Co.*—B. C. Mng. & Engg. Record, July, 1912; p. 371; 1000 w; 35c.

———. *Swaziland Tin;* [Report for 1911-12].—S. Afr. Mng. Jnl., Sept.7,1912; p. 11; 1200 w; 35c.

———. *The Seattle and Portland Hydraulic Work;* [Regrading and degrading with monitors and hydraulic system].—Jnl. of El'y, Power & Gas, Sept.7,1912; p. 192; 2100 w*; 30c.

———. *The Smoko Gravel Shaker;* [on Smoko No. 2 dredge, Victoria].—E. & M. J., Nov.2, p. 829; 400 w; 25c.

———. *Ueber die alluvialen Goldwäschereien in Ungarn im letzten Jahrzehnt;* [The alluvial gold washings in Hungary and Transylvania in the last decade].—Montan. Ztg., Oct.15, p. 392; Nov.1, p. —; 7000 w; 50c.

Power Shovels; Excavators

Bansen, H. (Editor).—*Mine Machinery, Vol. II: Mining Machinery* [in German].—See under Dredging.

Barbour, P. E.—*A California Dry Placer "Dredge."*—E. & M. J., Oct.12, p. 687; 500 w*; 25c.

Beals, A. E.—*Clay Mining Problems in the Eastern States.*—Brick, Sept.15,1912; p. 211; 2000 w*; 20c.

Bennett, J. C.—*Costs of Levelling Dredged Ground at Oroville, Cal., with an Electric Drag Bucket-Scraper.*—Engg. News, Oct. 17, p. 699; 1000 w*; 25c. Also in E. & M. J., Oct.26, p. 782; 800 w*; 25c.

Bötticher, —. *Eimerkettentrockenbagger mit Riemenantrieb und Lenixrolle auf Grube Julius;* [Bucket dredge with peripheral drive and Lenix roll for stripping and mining at Julius lignite mine, Prussia].—Braunkohle, May17,1912; 3 pp*; 50c.

Dennis, F. J.—*Modern Methods of Gravel Excavation.*—M. & S. P., Aug.3,1912; p. 136; 4000 w*; 20c.

Dowling, D. B.—*Coal Stripping in Alberta;* [Steam-shovel bench mining of Edmonton seam, Tofield].—Canadian Mng. Jnl., Aug.15,1912; p. 543; 400 w*; 25c.

Gerry, A. L.—*Iron Mining on the Mesabi Range, Minn.;* [Open-pit practice on gently dipping ore beds].—E. & M. J., Oct.12, p. 693; 3200 w*; 25c.

Haight, C. M.—*Changing Dipper Teeth on Steam Shovels.*—E. & M. J., Nov.16, p. 927; 500 w*; 25c.

Lovejoy, E.—*Clay Mining Methods.*—Brick, Sept.15, p. 203; 3000 w*; 20c.

Maguire, H. J.—*Replaceable Lips for Elevator Buckets.* — Amer. Inst. Mng. Engrs., Bull. No. 69; Sept.,1912; pp. 1017-1019; 800 w*; $1.15.

Paulmann, M. and R. Blaum.—*Die Nassbagger und die Baggereihilfsgeräte;* [Wet-process power shovels, and power-shovel accessories].—Berlin, 1912; $6.50 (book).

Purington, C. W.—*Drag-Line Excavator for Stripping at Kolchan (Ochotsk) Placers, E. Siberia;* [Discusses Perret's paper].—Instn. of Mng. & Met'gy, Bull. 94; July, 1912; 7 pp*; 65c.

Sanio, P.—*Ein Beitrag zur wirtschaftlichen Wertschätzung des maschinellen Gleisrückens;* [Judging the efficiency and commercial value of stripping shovels, with special reference to German lignite mining].—Braunkohle, Aug.2,1912; pp. 273-276*; 50c.

Wilson, J. B.—*Open Cut Mining;* [Bench mining with steam shovels, Mt. Morgan, Australia].—Australian Mng. Standd., Oct. 17, p. 369; 4000 w*; 35c.

Yahn, C. A.—*Pelles mécaniques pour travaux de terrassement;* [Steam power shovels, Menck system, in clay and cement works].—Rev. d. Matériaux, July,1912; p. 89; 1000 w*; 65c.

Fr. Z.—*Gedeckte Kohlenlager mit Greiferbetrieb;* [Construction and power-shovel operation of covered coal-storage piles in Frankfurt].—Kali Erz & Kohle, June25, 1912; p. 629; 750 w; 35c.

———. *A New Shovel Dipper;* ["Missabe" dipper].—Mining & Engg. World, Aug.3,1912; p. 216; 400 w*; 10c.

———. *A New Small Revolving Steam Shovel;* [Browning type].—Iron Age, Nov. 7, p. 1088; 600 w*; 30c.

———. *A Shovelling Machine for Loading and Handling Loose Materials;* [with delivery to belt conveyors; Myers-Whaley Co. type].—Engg. News, Sept.5,1912; p. 444; 1200 w*; 25c.

———. *Electric Excavator Employed on Subway Construction at Buenos Aires.*—Engg. & Contractg., Sept.18,1912; p. 317; 300 w*; 20c.

———. *Pelles mécaniques; système Menck;* [Menck system of power shovels].—Fer & Acier, July,1912; p. 102; 1000 w*; 45c.

———. *The Derringer Anthracite Stripping;* [Derringer, Pa.].—Mines & Minerals, Aug.1,1912; p. 5; 1000 w*; 35c.

MINE: MISCELLANEOUS AND GENERAL

Aikens, Warren.—*Hydro-Electric Power in the Butte-Anaconda District, Montana.*—Mg. & Eng. World, Nov.30,1912; p. 987; 6000 w*; 10c.

Alderson, V. C.—*Practical Economies Practiced in Metalliferous Mining and Smelting.*—Colo. School of Mines Mag., June,1912; p. 200; 3600 w; 65c.

Bansen, Hans (Editor).—*Die Bergwerksmaschinen, II: Gewinnungsmaschinen;* [Mine Machinery; Vol. II: Mining Machinery; by A. Gerke, L. Herwegen, O. Pütz, and K. Teiwes; devoted to dredges, power shovels, stripping machines; hydraulic monitors and elevators; compressors; drills, coal-cutters, and tunneling machines; wedging; electric blasting].—Berlin, 1912; 474 pp; 393 figs; $5.50 (book).

Barbour, P. E.—*Supplies for Mining Camps;* [4 winter months' rations for 20 men, Iron Mtn., Idaho].—E. & M. J., Aug. 3,1912; p. 197; 300 w; table; 25c.

Barbour, P. E.—*Food Supplies for Miners;* [Comparison with U. S. armv rations].—E. & M. J., Sept.28,1912; p. 579; 1000 w; table; 25c.

Baret, —*Exploitation de la 8. couche au puits Chatelus 2. de la concession des mines de la Loire;* [Mining practice on the rapidly varying No. 8 coal seam at the Chatelus shaft, Loire colliery, France].—Soc. Minrl. St. Etienne, Bull.; June,1912; pp. 561-585*; $1.15.

Bateman, G. C.—*The Porcupine Gold District, Ont.*—Mex. Mg. Jnl., Dec.,1912; p. 22; 3000 w*; 25c.

Baum, Bergassessor.—*Die Bergwerksanlage Admiral bei Hörde;* [The Admiral mining plant at Hörde].—Glückauf, Nov. 30,1910; p. 1951; 5000 w*; 50c.

Beals, A. E.—*Clay Mining Problems in the Eastern States.*—Brick, Sept.15,1912; p. 211; 2000 w*; 20c.

Berger, L.—*Chinas Bergbau, speziell seine Kohlen- und Eisen-industrie;* [China's mining, especially its coal and iron industry].—Technische Blätter, Nov.30,1912; p. 377; 2400 w*; 35c.

Blau, Ernst.—*Neuere Ausführungen von Drahtseilbahnen für Bergbau- und Hütenzwecke;* [New achievements in wire-rope tramways for mining and metallurgical purposes].—Montanist. Rundschau, Nov.16, 1912; p. 1205; 1500 w*; 35c.

Blau, E.—*Selbsttätige Wiegevorrichtung zur Ermittlung des Wageninhaltgewichts;* [Automatic weighing plant for determining weights of car contents].—Glückauf, June 1,1912; p. 871; 1500 w*; 50c.

Blum, Th.—*Die Vorteile des Umbruchstreckenbetriebe im Erzbergbau;* [Mining veins with haulage system outside of, and parallel to, the vein; advantages in ore mining].—Montanistische Rundschau, Aug. 1,1912; p. 745; 1800 w*; 45c.

Blumenau, H.—*Einige weniger bekannte Erzlagerstätten Spaniens;* [Some of the lesser-known ore deposits of Spain].—Metall u. Erz, Nov.8,1912; p. 74; 2000 w; 50 cts.

Brown, Gregory.—*Modern Practice in Mine Telephones.*—Coal Age, Dec.7,1912; p. 789; 3000 w*; 20c.

Carne, J. E.—*Antimony Mining in New South Wales.* (Bull. No. 16, Min. Res. Series, N. S. W.; abstract).—M. & S. P., Dec.7,1912; p. 728; 800 w; 20c.

Charlton, W. H.—*Insurance on Mine Property.*—E. & M. J., Aug.31,1912; p. 391; 1200 w; 25c.

Childs, J. N.—*Selecting Pumps to Unwater Anthracite Mines.*—Bl. Diam., Dec.7, 1912; p. 16; 1500 w*; 30c.

Clemens, E.—*Remedies for Electrical Troubles.*—Coal Age, Dec.7,1912; p. 793; 3000 w*; 20c.

Cole, A. A.—*The Relation of Transportation to Mining in Cobalt.*—Can. Mg. Jnl., Dec.1,1912; p. 795; 2000 w; 30c.

Coulant, M. E.—*Note sur les Mines de Cuivre d'Arghana, Vilayet de Diarbékir (Asie Minoure);* [The copper mines of Arghana, province of Diarbékir (Asia Minor)].—Annales de Mines (Paris), Oct., 1912, p. 281; 3500 w*; 65c.

Crane, W. R.—*Index of Mining Engineering Literature, Vol. II.*—New York, 1912; 461 pp; (book).

Crane, W. R.—*Exploitation des Mines Métalliques;* [Crane's textbook on metal

mining; translated into French and enlarged by A. F. J. Bordeaux].—Paris, 1912; 182 pp.; 65 figs.; $3; (book).

Daugherty, R. L.—*Annual Report of the South Dakota Mine Inspector.*—Mg. & Eng. World, Dec.14,1912; p. 1089; 1500 w; 10c.

Denison, F. N.—*Earthquakes, Strains and Stresses in Relation to Colliery Explosions.*—Canadian Mng. Inst., Trans.; Vol. 15, Pt. 1; 1912; pp. 26-31; $1.15.
Abstract in Mng. Sci., July18,1912; p. 40; 1400 w*; 20c.

Dods, A. K.—*Reinforced Concrete in Mine Structures in Gt. Britain.*—Iron & Coal Trades Rev., Aug.9,1912; p. 198; 1500 w; 35c.

Drake, F.—*Transvaal Mine Supplies;* [Consumption in 1911].—M. & S. P., Aug. 10,1912; p. 176; 600 w; tables; 20c.

Edwards, Geo. E.—*Scientific Management on the Menominee Range;* [Describes the up-to-date methods of operation at the properties of the Munro Iron Mg. Co.].—Mg. & Eng. World, Nov.23,1912; p. 947; 4000 w*; 10c.

Emmons, N. H.—*A Concise Method of Showing Ore Reserves.*—Amer. Inst., Mng. Engrs., Bull. 66, June,1912; pp. 603-610*; $1.15.

Feust, Arthur.—*The Chontales Mining District, Nicaragua.*—M. & S. P., Dec.7, 1912; p. 720; 2500 w*; 20c.

Forrest, S. N.—*Mining Mathematics.*—London, 1912; 312 pp.; 81 figs.; $2 (book).

Franke, G.—*Die neue Blende- u. Bleierzaufbereitung, Haldensturz- u. Wiederverladeanlage der Bleischarleygrube bei Beuthen;* [The new blende and lead-ore treatment, waste-dump disposal and reloading plant of the Bleischarley mine at Beuthen].—Glückauf, Nov.30,1912; p. 1945*; 2600 (last part); 50c.

Garrison, F. Lynwood.—*Decrease of Value in Ore Shoots with Depth.*—M. & S. P., Nov.30,1912; p. 700; 2500 w; 20c.

Haldane, W. G.—*The Relation of an Ore Testing Plant to the Mining Industry;* [Read to Colo. Mng. & Met'g'l Asso.].—Mex. Mng. Jnl., Aug.,1912; p. 39; 2000 w; 25c.

Hale, Fred A., Jr.—*The Yellow Pine Mining District, Nev.*—Mex. Mg. Jnl., Dec., 1912; p. 29; 2500 w*; 25c.

Harris, Sir David.—*What South Africa Owes to the Mining Industry.*—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 35; 1200 w; $1.

Hoffman, Frederick L.—*Miners' Phthisis on the Rand.*—E. & M. J., Dec.7,1912; p. 1081; 3500 w; 25c.

Immerschitt, Engineer.—*Die Verwendung von Druckwasser zur Hereingewinnung von Kohle;* [The application of water under pressure to the mining of coal].—Berg- u. Hüttenmännische Rundschau, Nov.20,1912, p. 40; 3800 w*; 25 cts.

Jennings, J. T.—*Electricity Applied to Coal Mining.*—Coal Age, Dec.7,1912; p. 779; 2000 w; 20c.

Jordan, F. A.—*Moose Mountain Iron Mine, Canada.*—Can. Mg. Jnl., Dec.1,1912; p. 807; 3000 w; 30c.

Kryschanofsky, W. F.—*Serpentine Asbestos Deposits in the Urals;* [Paper read before Can. Mg. Inst.; abstract].—Mg. & Eng. World, Nov.30,1912; p. 1002; 750 w; 10c.

Lacy, F. P.—*A Method of Log. Sine Correction.*—Informes y Memorias del Instituto de Minas y Metallurgia, Vol. 3, No. 1, 1912-1913; p. 53; 1300 w*; 50 cts.

Lakes, Arthur.—*Relation of Shearage Zones and Mineral Veins.*—Mg. & Eng. World, Nov.30,1912; p. 1001; 10c.

Lakes, Arthur.—*Depth and Continuity of Fissure Veins and Their Ore.*—Mg. & Eng. World, Dec.14,1912; p. 1095; 3000 w*; 10c.

Lamb, Mark R.—*Who Is a Mining Engineer?*—Mines & Methods, Nov.,1912; p. 55; 2000 w*; 20c.
2000 w*; 20c. Also in E. & M. J., Nov.16, p. 940; 1800 w*; 25c.

Letcher, Owen.—*The Great Mines of Africa; Main Reef West.*—Mg. & Eng. World, Dec.7,1912; p. 1051; 1500 w*; 10c.

Lof.—*Electric Mining Applications.*—See under Electricity.

Lovejoy, E.—*Clay Mining Methods.*—Brick, Sept.15, p. 203; 3000 w*; 20c.

Low, V. F. S.—*Mining Practices Compared;* [In world's leading metal mining centers].—Mng. Mag., July, p. 58; 2500 w; 45c.

Joralemon, Ira B.—*Geology Applied to Mine Examination;* [Read to Phelps-Dodge Geologic Conference, Morenci, Ariz.].—E. & M. J., Aug.10,1912; p. 247; 3600 w; 25c.

Martin, Al. H.—*Exploiting the Deepest American Gold Deposits;* [Deep mines on Mother Lode, Calif.].—Mines & Methods, Oct.,1912; p. 37; 3000 w; 25c.

Martin, Al. H.—*Results of Deep Mining in California;* [Methods of working deep mines of Mother Lode].—Mines & Minerals, Nov., p. 210; 2100 w*; 35c.

McDonald, P. B.—*Use of Sludge Boxes for Diamond Drills.*—Mg. & Eng. World, Nov.23,1912; p. 954; 1200 w*; 10c.

McTigue, Edward J.—*Protection of Mining Machine Cables and Men Handling Them.*—Coal Age, Dec.7,1912; p. 799; 250 w; 20c.

Michael, R.—*Die Temperaturmessungen im Tiefbohrloch Czuchow;* [Temperature measurements in the world's deepest borehole at Czuchow, Silesia; from Kgl. Preuss. Geol. L-A., Jahrb., Vol. 31, Part 2, No. 1].—Kohle & Erz, Oct.21, p. 1106; 2200 w*; 35c.

Miller, Wm. J.—*Garnet Deposits of Warren County, N. Y.* (Abstracted from Economic Geology, Aug., 1912).—Mg. & Eng. World, Dec.14,1912; p. 1084; 1200 w; 10c.

Munroe, H. S.—*Mine Sampling and Valuation;* [Read to Mng. & Met'g'l Soc. of Amer., N. Y. section, May16,1912; abstract].—E. & M. J., June29,1912; p. 1276; 1500 w; 25c. Also in M. & S. P., July6, p. 18; 1000 w; 20c.

Müssing, E.—*Preisentwickelung in der Montan-Industrie seit* 1870; [Evolution of prices in the German mineral and metal industries since 1870].—Augsburg, 1912; chart 130x65 cms; explanatory sheet; $8.

Myrick, C. M.—*An Experience in the Use of Water Power;* [Transactions Am. Inst. Mg. Eng.; abstract].—Mg. & Eng. World, Nov.16,1912; p. 905; 1500 w*; 10c.

Packard, G. A.—*Food Supply for Miners;* [Rations of 10 men and cook for one week, Coronation Island, Alaska].—E. & M. J., June29,1912; p. 1259; 500 w; 25c.

Pauly, K. A.—*Deep Mine Hoisting.*—Mex. Mng. Jnl., Nov., p. 33; 5000 w*; 25c.

Perkins, Frank C.—*Horizontal Mine Boring Under Pressure.*—M. & M., Dec., 1912; p. 250; 1200 w*; 35c.

Ramsay, E.—*European Mine Practices Contrasted with Mining Practices in the*

U. S.; [Report of American commission to Europe, 1911; read to Alabama Coal Operators' Aso., June, 1912].—Coal & Coke Op., July25, p. 49; 4400 w; 25c.

Rice, E. E.—*Construction of Triangulation Stations.*—M. & S. P., Nov.23,1912; p. 661; 1200 w*; 20c.

Rice, Claude T.—*Square-Set Timbering; Importance and Evolution* (first article).—Mg. & Eng. World, Dec.14,1912; p. 1079; 4500 w*; Dec.21,1912; p. 1133; 6500 w; 20c.

Roderick, Jas. E.—*Report of Department of Mines of Pennsylvania for* 1911.—Dep. of Mines of Pa., Part 1 (Anthracite), pp* 672; Part 2 (Bituminous), pp* 960.

Rollandet, G. J.—*A Caisson System of Placer Mining Under Water;* [Williamson system].—Mng. Sci., Aug.1,1912; p. 68; 1000 w*; 20c.

Sexton, Frederic H., and Hodge, Charles A.—*Tests on Specimens of Nova Scotian Mine Timber.*—Jnl. Mg. Soc., N. S., Vol. XVII, 1912; p. 70; 11 p.*; 50c.

Stillman, W. A.—*Squeezes and Creeps in the "B" Seam* (Pennsylvania).—Coal & Coke Op., Dec.5,1912; p. 362; 1000 w; 20c.

Thain, T. E.—*Reinforced Concrete;* [Read to S. Wales Inst. of Engrs; includes description of various pithead structures, coke hoppers, etc., in Europe].—Iron & Coal Trades Rev., July19,1912; p. 81; 5000 w*; 35c.

Tuttle, Edgar G.—*The Magdalena Mining District, N. Mexico.*—M. & M., Dec.,1912; p. 275; 35c.

Tonge, J.—*The Principles and Practice of Coal Mining.*—London, 1912; 372 pp.; $1.50 (book).

White, A. G.—*Notes on the Zomelahuacan Mining District, State of Vera Cruz (Mexico).*—Informes y Memorias del Instituto de Minas y Metalurgia, Vol. 3, No. 1, 1912-1913, p. 49; 1600 w; 50 cts.

Wilson, J. Bowie.—*Mining Engineers' Reports: How to Write Them;* [Aust. Mg. & Eng. Rev.; abstract].—Mg. & Eng. World, Nov.23,1912; p. 957; 2000 w; 10c.

Woodburn, J. A.—*Some Features of Mining in South Africa;* [General review of mining practices].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 199; 2800 w; $1.

Wright, C. H.—*Electrical Transmission for Mining and Other Purposes in the Maritime Provinces, Canada.*—Jnl. Mg. Soc., N. S., Vol. XVII, 1912; p. 45; 6 p.; 50c.

Young. C. M.—*Dust Explosions in Coal Mines.*—M. & M., Dec.,1912; p. 258; 3000 w; 35c.

———. *Beton im Bergbau;* [Requirements of concrete for various mining purposes].—Baumaterialenmarkt, No. 26, 1912; pp. 687-688*; 50c.

———. *Deep Hoisting Problems and the Men Who Solved Them;* [on the Rand].—S. Afr. Mng. Jnl., Oct.5, p. 140; 1000 w; 35c.

———. *Deep Mining;* [on the Rand and elsewhere].—S. Afr. Mng. Jnl., Oct.12, p. 171; 1000 w; 35c.

———. *Development of Ore Bodies.*—Mg. & Eng. World, Nov.16,1912; p. 894; 1500 w; 10c.

———. *Ein Arbeiterbergwerk;* [Miners' co-operative mine; Monthieur colliery, near St. Etienne, France, and its failure].—Montan Ztg., July1,1912; p. 242; 1000 w; 35c.

———. *German Picking Table in America.*—Bl. Diam., Dec.7,1912; p. 19; 750 w*; 30c.

———. *Le Remblayage Hydraulique aux Mines de Descazeville;* [Hydraulic filling at the Descazeville mines].—Revue Industrielle, Nov.16,1912, p. 9; 2300 w; 25 cts.

———. *Milling Methods in the Manhattan District, Nev.*—Mg. & Eng. World, Dec. 7,1912; p. 1044; 1800 w*; 10c.

———. *Mining in Frozen Ground;* [Practice in Klondike].—Mng. Mag., Sept.,1912; p. 176; 1000 w*; 35c.

———. *"Oria," a Proposed Word; Incorrect Use of "Ores."*—Mining & Engg. World, Aug.31,1912; p. 379; 500 w; 10c.

———. *Stores Consumed by the Coal Mines in Natal During the Year* 1911.—S. Afr. Engg., May,1912; p. 80; 500 w; table; 35c.

———. *Stores Consumed on Mines in the Orange Free State During* 1911; [Value £562,711].—S. Afr. Engg., May,1912; p. 79; 1500 w; 35c.

———. *Suspending a Diamond Drill in a Stope.*—E. & M. J., Nov.23,1912; p. 975; 800 w*; 25c.

———. *Thawing Frozen Ground.*—Mng. Mag., Oct., p. 254; 1000 w*; 45c.

———. *The More Active Mining Properties of Oregon.* (Bull. No. 2, Extension Series 5, Oregon Bu. of Mines; abstract).—Mg. & Mng. World, Dec.7,1912; p. 1052; 1200 w; 10c.

———. *The Motor Car in Rescue Station Work.*—Coal Age, Dec.7,1912; p. 806; 1000 w*; 20c.

———. *Unwatering Old Workings.*—E. & M. J., Nov.23,1912; p. 976; 500 w*; 25c.

———. *Versuche und Verbesserungen beim Bergwerksbetriebe in Preussen wärend des Jahres* 1911; [Experiments and improvements in mine working in Prussia in 1911] (continuation).—Bergbau, Nov.28, 1912, p. 676; 1000 w*; 25 cts.

———. *What One Mine Used in the Way of Sundries;* [Mill and mine supplies, Ready Bullion plant of Alaska United G. M. Co., Dec. 16-31, 1911].—Mining & Engg. World, June29,1912; p. 1350; 600 w; 10c.

Deep Mines; Deep Mining

Tyke.—*Temperature in Deep Mines.*—Sci. & Art of Mng., Nov. 9, p. 148; 2000 w; 35c.

———. *Working Costs at* 8000 *ft.;* [Probable conditions on the Rand].—S. Afr. Mng. Jnl., Oct.19, p. 207; 1400 w; 35c.

ELECTRICITY IN MINES

For electricity, compressed air, steam, etc., in mines and mining, milling, etc., see under "Power and Machinery."

MILL AND MILLING.

CHAPTER XIV.

REDUCTION: CRUSHING, GRINDING, ETC.

Adams, G. M.—*Notes on Cams for Stamp Mills.*—S. Afr. Inst. of Engrs., Jnl.; Aug., 1912; 5 pp.; 75c.

Allen, A. W.—*Pebbles for Tube Milling.*—Mng. Mag., July,1912; p. 61; 1200 w; 45c.

Ashcroft, J. W.—*Flotation Process at Kyloe, N. S. W.* (Bull. 97, Inst. Mg. & Met.; abstract).—E. & M. J., Dec.7,1912; p. 1085; 5000 w*; 25c. Also in Can. Mg. Jnl., Dec.1,1912; p. 797; 5000 w*; 30c.

Behr, H. C.—*Stamp Lifting Device;* [U. S. Pat. 1,012,187].—E. & M. J., Oct.19, p. 738; 50 w*; 25c.

Bernewitz, M. W. von—*Huntington Mill Practice at Kalgoorlie.*—W. Aus. M. & S. P., Nov.16, p. 618; 3200 w*; 20c.

Bernewitz, M. W. von.—*Rock Crushing at Kalgoorlie.*—M. & S. P., Oct.12, p. 469; 1400 w*; 20c.

Blau, Ernst.—*Neuere Ausführungen von Drahtseilbahnen für Bergbau- und Hüttenzwecke;* [New achievements in wire-rope tramways for mining and metallurgical purposes].—Montanist. Rundschau, Nov.16, 1912; p. 1205; 1500 w*; 35c.

Brockunier, S. H.—*Costs at the Erie Mine;* [Eureka district, Calif.; stamp mill efficiency, etc.].—E. & M. J., Sept.7,1912; p. 455; 2500 w; 25c.

Clark, Allan J., and Sharwood, W. J.—*Metallurgy of the Ores of the Homestake Mine, So. Dakota.* (Bulletin 98, Inst. Mg. & Met.; abstract).—Mg. & Eng. World, Dec.7,1912; p. 1035; 5000 w; Dec.14,1912; p. 1090; 3000 w*; 20c.

Degenhardt, W. R.—*Holman Pneumatic Stamp.*—W. Australian Chamber of Mines, Jnl.; Aug.,1912; p. 187; 2400 w*; 65c.

Del Mar, A.—*An Unusual Type of Mill;* [Fort Bidwell crusher station, California].—M. & S. P., June29,1912; p. 897; 1000 w; 20c.

Denny, G. A.—*Efficiencies of Crushing Plants;* [The Chilian mill and its modifications].—Mex. Mng. Jnl., July,1912; p. 34; 5500 w; 35c.

Desoller, T. C.—*Rock-House Practice of the Quincy Mining Co.;* [Milling native copper; read to Lake Superior Mng. Inst.; abstract].—Mining & Engg. World, Sept.21, 1912; p. 529; 1800 w*; 10c.

Dobbins, W. and H. Anderson.—*Buffalo Mine and Mill, Cobalt, Ont.*—E. & M. J., Aug.3,1912; p. 2; 6500 w*; 25c.

Drucker, A. B.—*Mining Plants of the Oriental Con., Unsan, Korea.*—M. & S. P., Nov.23,1912; p. 652; 2500 w*; 20c.

Durant, H. T.—*Dry Tube Milling.*—E. & M. J., July20,1912; p. 111; 750 w*; 25c.

Fawns, S.—*Tin Deposits.*—See under Tin.

Forbes, D. L. H.—*Treatment of Complex Silver Ore at the Lucky Tiger Mine, Sonora.*—Amer. Inst. Mng. Engrs., Bull. 68, Aug., 1912; pp. 769; $10*; $1.15.

Franke, G.—*Die neue Blende- und Bleierzaufbereitung, Haldensturz- und Wiederverladeanlage der Bleischarleygrube bei Beuthen;* [The new blende and lead-ore treatment, waste-dump and reloading plant of the Bleischarley mine at Beuthen].—Glückauf, Nov.16,1912; p. 1865; 3900 w* (first part); Nov.23; p. 1906; 5800 w* (second part); $1.

Franklin, J. S.—*Modern Rock Crushing Machinery;* [Edison rolls at Martinsburg, W. Va., limestone plant].—Cassier's Mag., Aug.,1912; p. 140; 4000 w*; 35c.

French, W. G.—*An Unusual Type of Mill;* [Crusher and stamps at Fort Bidwell mine, Modoc county, Cal.].—M. & S. P., June22, 1912; p. 865; 500 w*; 20c.

Hamilton, J. W. H.—*Developments in the Preparation of Iron Ores.* (Paper read before Am. Ir. & Steel Inst.; abstract).—Ir. Tr. Rev., Nov.28,1912; p. 1013; 7500 w; 25c.

Hardinge, H. W.—*The Conical Mill for Fine Grinding;* [Read to Canadian Mng. Inst.].—Mining & Engg. World, Sept.14, 1912; p. 487; 1800 w*; 10c.

Hart, J. F. and H. L. Williams.—*West End Consol. Mill, Tonopah;* [All-sliming plant extracting 90.4% on $17 silver ore at cost of $3.52 per ton].—E. & M. J., July27, 1912; p. 163; 4500 w*; 25c.

Hendryx, Wilbur A.—*Slime Agitation on the Rand.*—Mg. Sci., Dec.5,1912; p. 365; 1000 w; 20c.

Hodge, W. R.—*The Ahmeek Mill, Hubbell, Mich.*—E. & M. J., Oct.19, p. 749; 2800 w*; 25c.

Howard, L. O.—*New Stamp Mill of the Manhattan-Big Four.*—Salt Lake Mng. Rev., Sept.30,1912; p. 16; 1800 w*; 25c.

Hutchinson, J. W.—*Lime in Cyanidation;* [Goldfield Consol. mill, Nevada; crushing in water vs. crushing in solution].—E. & M. J., July27,1912; p. 170; 1500 w; 25c.

Letcher, Owen.—*The Great Mines of Africa: Main Reef West.*—Mg. & Eng. World, Dec.7,1912; p. 1051; 1500 w*; 10c.

Lovegrove, E. J.; J. S. Flett and J. A. Howe.—*Attrition Tests of Road-Making Stones.*—London, 1912; 80 pp.*; $1.75; (book).

Martin, A. M.—*The Pioneer Gold Stamp Mills of California;* [History of early-day stamps].—Mining & Engg. World, Aug.24, 1912; p. 332; 1500 w; 10c.

Martin, A. H.—*Evolution of Stamp Milling at Home and Abroad;* [History in California and Randfontein Central, Rand].—Mines & Methods, Sept.,1912; p. 561; 2500 w; 25c.

McLaren, Al.—*Lane Slow-Speed Mill Test;* [at Llano Gold & Rare Metal Mng. Co., Texas].—Salt Lake Mng. Rev., June15, 1912; p. 24; 400 w; 25c.

Megraw, Herbert A.—*Cyaniding at the Dome Mill, Ont.*—E. & M. J., Nov.23,1912; p. 983; 4000 w*; 25c.

Meuskens, Clemens.—*Entwickelung und Stand der heutigen Stein- und Kalisalzauf-*

hereafter). III; [Development and status of modern stone and potash-salt preparation]. Kali, Nov.1,1912; p. 540; 4500 w*; 35c.

Mueller, J. G.—*Grinding Practice at McKinley-Darragh Mill, Cobalt, Ont.*—E. & M. J., Aug.31,1912; p. 408; 1000 w; 25c.

Nagel, O.—*Amerikanische Mahlmaschinen;* [Some American types of pulverizing mills].—Chemiker Ztg., June18,1912; p. 685; 1200 w*; 35c.

Parsons, C. L.—*Losses in the Concentration of Zinc Ores;* (Bulletin 47, U. S. Bur. Mines; abstract).—Mg. & Eng. World, Nov.23,1912; p. 956; 1100 w; 10c.

Pütz.—*Zinc-Lead Ore Dressing in Silesia.*—See Lead.

Schmitt, C. O.—*Textbook of Rand Metallurgical Practive, Vol. II: Part 1, The Design and Construction of Reduction Plants.*— Johannesburg, London, Philadelphia; 1912; pp. 350; 335 figs; $6.50 (book).

Schnatterbeck, C. C.—*Flint Pebbles for Tube Mills.*—Mng. Sci., Aug.22,1912; p. 121; 700 w; 20c.

Simmons, J.—*Crushing in Slow-Speed Chilean Mills in South Dakota;* [at the Minnesota mill. Maitland].—Mining & Engg. World, Nov.2, p. 813; 2000 w*; 10c.

Smith, L.—*Troublesome Stamp Battery Shoes.*—E. & M. J., Oct.19, p. 738; 400 w; 25c.

Springer, J. F.—*The Edison Giant Crushing Roll.*—Iron Age, Sept. 14,1912; p. 591; 1200 w*; 30c. Also in M. & S. P., Aug.31, 1912; p. 276; 2200 w; 10c.

Stadler, H.—*The New Metallurgy and the East Rand Propr. Mines;* [Discusses fine grinding and extraction, and working costs]. Mines & Minerals, July,1912; p. 739; 3600 w; tables; 35c.

Stoek, H. N.—*Geology, Mining and Preparation of Anthracite.*—Western Soc. of Engrs., Jnl.; Oct.,1912; p. 705-735*; 65c.

Tench, S. V.—*Preparation of Anthracite Coal;* [Read to Panther Valley Mng. Inst.]. —Coal Age, Nov.16, p. 681; 2100 w; 20c.

Traylor, S. W.—*Crushing Plant for the Construction of the Kensico Dam;* [500 cu. yds. per hour for dam containing 1,000,000 cu. yds. of masonry; Blake jaw crushers and rolls].—Engg. & Contractg., Aug.28, 1912; p. 231; 2100 w*; 20c. Also in Mining & Engg. World, Feb.24,1912; p. 451; 3000 w*; 10c.

Urquhart, Charles H.—*The Black Oak Mill, Calif.*—M. & S. P., Nov.30,1912; p. 687; 3000 w*; 20c.

Voorhes, K. E.—*Crushing Plant and Sampling Mill of Reinforced Concrete;* [Steptoe, Nevada].—Engg. Record, Sept.14, 1912; p. 291; 900 w*; 20c.

Wasson, Albert.—*Treatment of Tin Ore in Cornwall.*—E. & M. J., Nov.23,1912; p. 979; 1200 w; 25c.

———. *A New Mining Machine;* [Hoadley-Knight machine to simultaneously mine and granulate the coal face].—Coal Age, July13,1912; p. 49; 1000 w*; 20c.

———. *Class of Crushing Rolls in Use at Coal Mines.*—Mining & Engg. World, Sept.28,1912; p. 581; 500 w; 10c.

———. *Edison Giant Crushing Rolls;* [at Martinsburg, W. Va., lime plant].—B. C. Mng. & Engg. Record, July,1912; p. 365; 3600 w; 35c.

———. *Electric Motor Drive for Tube Mills.*—Mining & Engg. World, Sept.14, 1912; p. 490; 300 w; 10c.

———. *Feed Gate for Coarse Ore;* [On hoppers for gyratory crusher at St. Louis Smltg. & Refg. Co., Mo., mill].—E. & M. J., July13,1912; p. 64; 500 w*; 25c.

———. *Gate for Controlling Ore-Feed to Rolls or Crushers.*—E. & M. J., Aug.31, 1912; p. 400; 200 w*; 25c.

———. *Gravity Yard for a Ballast-Crushing Plant;* [near Piedra, Cal.].—Engg. Record, June22,1912; p. 695; 1000 w; 25c.

———. *Is the Stamp Mill Doomed?*—S. Afr. Mng. Jnl., Sept.28, p. 107; 1400 w; 35c.

———. *Metallurgy of the Rand Banket;* [Brief outline of gold-ore treatment on Rand; sizing, sorting, stamp milling, tube mills, etc.].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; pp. 177-198; 16,000 w*; $1.

———. *Milling Methods in the Manhattan District, Nev.*—Mg. & Eng. World, Dec. 7,1912; p. 1044; 1800 w*; 10c.

———. *Preparation of Anthracite Coal;* [Roll crushing].—Coal Age, Aug.31,1912; p. 299; 600 w; 20c.

———. *Recent Copper Milling Practice at Lake Superior.*—Met. & Chem. Eng., Dec.,1912; p. 795; 6000 w*; 35c.

———. *Recent Developments in Coal Freaking;* [Primus jaw crusher].—Iron & Coal Trades Rev., July19,1912; p. 90; 1000 w*; 35c.

———. *Removing Broken Stems from Stamp Heads.*—E. & M. J., Sept.21,1912; p 544; 500 w*; 25c.

———. *Removing Gyratory Crusher Heads.*—E. & M. J., Nov.9, p. 879; 250 w*; 25c.

———. *Repairing a Gyratory Crusher.* —E. & M. J., Aug.10,1912; p. 257; 600 w*; 25c.

———. *Rolls vs. Stamps on the Rand.*— E. & M. J., Sept.7,1912; p. 447; 100 w; 25c.

———. *Standard Sizes of Hardinge Conical Pebble Mill.*—E. & M. J., Oct.26, p. 786; 300 w; 25c.

———. *The Cons. Langlaagte Reduction Works.*—S. Afr. Mng. Jnl., June8,1912; p. 537; 2000 w*; 35c.

———. *The Gravity Stamp on the Witwatersrand.*—Mining & Engg. Rand, Oct.12, p. 675; 1000 w; 10c.

———. *The Hardinge Mill Tests at the Village Deep.*—S. Afr. Mng. Jnl., Aug.17, 1912; p. 922; 800 w; 35c.

———. *Tin Ore Dressing and Metallurgy.* —Mines & Minerals, Sept., p. 89; 2000 w*; 35c.

CONCENTRATION: SORTING, SIZING, WASHING

Allen, A. W.—*Concentration vs. Cyanidation.*—Mng. Mag., July,1912; p. 43; 1000 w; 35c.

Andros, S. O.—*Conservation of Water in Placer Prospecting;* [Describes special rocker for prospecting desert gravels].—E. & M. J., June29,1912; p. 1266; 1000 w*; 25c.

Ashcroft, J. W.—*The Flotation Process; As Applied to the Concentration of Copper Ore at the Kyloe Copper Mine, N. S. Wales.* —Instn. of Mng. & Met'gy, Bull. 97, Oct., 1912; 23 pp.; 65c.

Abstract in E. & M. J., Dec.7,1912; p. 1085; 5000 w*; 25c. Also in Can. Mg. Jnl., Dec.1,1912; p. 797; 5000 w*; 30c.

Bain, H. F.—*Improvements at the Ashio Copper Mines and Mills, Japan.*—M. & S. P., Aug.24,1912; p. 239; 2000 w*; 20c.

Barbour, P. E.—*A California Dry Placer "Dredge."*—E. & M. J., Oct.12, p. 687; 500 w*; 25c.

Barnitzke, J. E.—*Development of Diamond Recovery Methods;* [Washing German S. W. Africa gravels].—S. Agr. Mng. Jnl., Anniversary No., Sept.,1912; p. 275; 3000 w*; $1.

Beattie, H. M.—*Acme Graphite Mines and Mills;* [Beyers, Penna.].—E. & M. J., July20,1912; p. 115; 3800 w*; 25c.

Boericke, W. F.—*Small Concentrating Mills in the Wisconsin Zinc District.*—M. & S. P., June15,1912; p. 828; 3500 w*; 20c.

Brown, C. H.—*The Sizing of Fine Dry Ore.*—E. & M. J., June29,1912; p. 1281; 3300 w*; 25c.

Carter, T. L.—*The Gold Placers of Arizona; Dry Washings.*—M. & S. P., Aug.10, 1912; p. 166; 3600 w*; 20c.

Chase, Thorington.—*The World's Greatest Smelter.* (Description of the Washoe plant, Montana).—Mex. Mg. Jnl., Dec., 1912; p. 30; 6000 w; 25c.

Coghill, Will H.—*Short-Order Lime Water for the Laboratory.*—Mg. & Eng. World, Nov.30,1912; p. 995; 10c.

Cornwall, W. H.—*Concentrating Low-Grade Silver-Lead Ore at Aspen, Colo.*—Met. & Chem. Engg., Oct.,1912; p. 652; 1000 w*; 35c.

Delamater, G. R.—*Coal Washery Plant Control.*—Coal Age, July20,1912; p. 82; 2000 w*; 20c.

Delamater, G. R.—*Coal Washing Efficiency.*—8th Internatnl. Congr. of Appl. Chem'y, Vol.10, pp. 129-137.

Dobbins, W. and H. Anderson.—*Buffalo Mine and Mill, Cobalt, Ont.*—E. & M. J., Aug.3,1912; p. 2; 6500 w*; 25c.

Downey, C. J.—*The Burnhart Concentrator.*—Mng. Sci., June27,1912; p. 544; 1500 w*; 20c.

Downey, C. J.—*Multiple-Deck Concentration of Slimes;* [New Wilfley large capacity slime tables].—Mng. Sci., July25,1912; p. 52; 2800 w*; 20c.

Dreibrodt, O.—*Neuer Apparat zur Trennung der Mineralien von Salzgesteinen mit schweren Flüssigkeiten;* [Separation of saline minerals by flotation in heavy liquids; chiefly in chemical analysis].—Kali, July1,1912; p. 314; 1000 w*; 35c.

Feret, R.—*Air-Sifting as a Method for the Quantitative Determination of the Finest Particles Contained in Pulverulent Materials.*—Internatnl. Asso. f. Testg. Materials, Vol. 11, No. 11; 1912; 15 pp*; 95c.

Fawns, S.—*Tin.*—See under Tin.

Forbes, D. L. H.—*Treatment of Complex Silver Ore at the Lucky Tiger Mine, Sonora.*—Amer. Inst. Mng. Engrs., Bull. 68, Aug., 1912; pp. 769-810*; $1.15.

Hale, F. A.—*The Yellow Pine Mill;* [Clark county, Nev.; Zinc-silver-lead].—Salt Lake Mng. Rev., July30,1912; p. 33; 1200 w; 25c.

Hamilton, J.—*Progress in Preparation of Iron Ores.*—See under Iron Ores.

Handy, R. S.—*Economic Efficiency in Lead Concentration;* [Frue vanner tests at Bunker Hill & Sullivan mill].—Mines & Minerals, Nov., p. 211; 1000 w*; 35c.

Hardinge, H. W.—*Wet Concentration of Furnace Slags;* [For recovering gold and silver].—E. & M. J., June29,1912; p. 1262; 1100 w; 25c.

Hermanns, —*Ueber Einrichtungen zur elektromagnetischen Ausscheidung von Eisen aus nichtmagnetischen Stoffen;* [Some electro-magnetic equipments for separating iron from non-magnetic materials; costs and efficiency].—Ver. z. Befördg. d. Gewerbefleiss, Verhandl; June,1912; pp. 353-373*; 75c.

Herwegen, L.—*Ueber die Bedeutung der Flotationstechnik;* [The significance of flotation methods with special reference to Austrian ores; read to Bergmannstag, Vienna, Sept., 1912; abstract].—Montanist. Rundschau, Sept.15,1912; p. 965; 600 w; 50c.

Herwegen, Leo.—*Die Schwimmverfahren, ihre Entwickelung und Bedeutung für die Erzaufbereitung;* [The flotation processes, development and significance in ore dressing].—Glückauf, July27,1912; p. 1185-1194; Aug.3, pp. 1231-1242*; 75c.

Abstract in E. & M. J., Sept.14,1912; p. 500; 600 w; 25c.

Hodge, W. R.—*The Ahmeek Mill, Hubbell, Mich.*—E. & M. J., Oct.19, p. 749; 2800 w*; 25c.

Holtmann, —. *The Leuschner Flotation Process;* [at Friedrichssegen mines, Lahn, Germany, and elsewhere; chiefly on chalcopyrite, blende, galena; from "Glückauf," March 9, 1912].—Mng. Jnl., Apr.20,1912; p. 402; 1000 w; 25c. Also in E. & M. J., Sept. 28, p. 581; 1600 w; 25c.

Howard, L. O.—*"Ben Harrison" Concentrating Plant;* [Sumpter district, Oreg.; concentrating stibnite containing gold-silver values].—Salt Lake Mng. Rev., Oct.15, p. 16; 1200 w*; 25c.

Inouye, T.—*Flotation of Zinc Ores in Japan;* [at Kamioka mine, Hida and Etchu provinces].—M. & S. P., June29,1912; p. 892; 1000 w*; 20c.

Johnston, A. McA.—*Investigation of Magneticaly Separated Iron from Mill Pulp.*—Cheml. Met. & Mng. Soc. of S. Afr., Jnl.; Aug.,1912; p. 50; 3000 w; 90c.

Abstract in M. & S. P., Oct.12, p. 463; 2500 w; 20c.

Kraus, Fr.—*Ueber die Berechnung der Gleichstrom-Elektromagnete;* [Computations for direct-current electromagnets].—Elektrotechnik & Masch. Bau., Oct.20, p. 869-875*; 4800 w*; 35c.

Krom, S. A.—*The James Diagonal-Plane Slimer.*—Amer. Inst. Mng. Engrs., Bull 66, June,1912; pp. 649-654*; $1.15.

Louis, H.—*The Magnetic Concentration of Iron Ores;* [Reviews modern processes and principles; read to W. of Scotland Iron & Steel Inst.; abstract].—Iron & Coal Trades Rev., May24,1912; p. 836; 5000 w*; 35c.

Mackenzie, G. C.—*Ore Dressing and Metallurgical Laboratory, Canada Dept. of Mines;* [Magnetic concentration tests on magnetites and on copper-nickel ore].—Canada Dept. Mines, Mines Branch, Rep. f. 1911; pp. 58-83*.

Martin, A. H.—*Hydraulic Elevators in Placer Mining.*—E. & M. J., Nov.16, p. 929; 1200 w; 25c.

Martin, A. H.—*Canvas-Table Concentration in California.*—E. & M. J., Sept.21, 1912; p. 542; 1600 w*; 25c.

MacCoy, F.—*Esperanza-Federal Classifier.*—E. & M. J., Sept.28,1912; p. 591; 700 w*; 25c.

Megraw, Herbert A.—*Cyaniding at the Dome Mill, Ont.*—E. & M. J., Nov.23,1912; p. 983; 4000 w*; 25c.

Merrill, F. J. H.—*Dry Concentration of*

Placer Gold.—M. & S. P., July13,1912; p. 50; 2500 w*; 20c.

Meuskens, Cl.—*Das Schwimmverfahren der Mineral Separation, Ltd.;* [Flotation process of Minerals Separation, Ltd., for copper, zinc, molybdenum and silver-gold ores].—Techn. Blätter, Sept.21,1912; p. 297; 3000 w*; 35c.

Mueller, F. E.—*Durham Coal & Iron Co.'s Plant at Soddy, Tenn.;* [Washing plant and surface equipment].—Coal Age, Oct.19, p. 528; 1800 w*; 20c.

Olmsted, Geo. M.—*Iron Ore Washing Calculations.*—E. & M. J., Dec.7,1912; p. 1071; 100 w*; 25c.

Overstrom, G. A.—*Improved Teeter-Box Sampler;* [for tailings in Missouri lead district].—E. & M. J., Aug.17,1912; p. 303; 600 w*; 25c.

Parmelee, H. C.—*Zinc Ore-Dressing in Colorado;* [Chiefly on magnetic separation, and roasting and drying].—Met. & Chemi. Engg., Sept.,1912; p. 527; 3200 w*; 35c.

Parsons, C. L.—*Losses in the Concentration of Zinc Ores;* (Bulletin 47, U. S. Bur. Mines; abstract).—Mg. & Eng. World, Nov.23,1912; p. 956; 1100 w; 10c.

Parsons, W. F. C., and E. M. Archbald.—*The Bathurst Iron Deposit, N. S.;* [Crushing and washing plant].—Canadian Mng. Jnl., Oct.1, p. 686; Oct.15, p. 710; Nov.1, p. —; 4000 w*; 55c.

Peck, P. F.—*The Peck Centrifugal Concentrator.*—E. & M. J., Aug.3,1912; p. 222; 1000 w*; 25c.

Pfening, H. F.—*The Design of Coal Screens.*—Coal Age, Sept.14,1912; p. 352; 1000 w; 20c.

Pickings, H. B.—*Tungsten Milling Practice in Nova Scotia.*—Mining & Engg. World, July13,1912; p. 60; 400 w; 10c.

Prosser, W. C.—*Electrostatic Zinc Plant, Sunnyside Mill;* [Huff process at Eureka, Colo.].—E. & M. J., July20,1912; p. 105; 250 w*; 25c.

Ruthenburg, M.—*New Method of Dressing Cornish Tin Ores;* [Ruthenburg electromagnetic separator].—Met. & Chemi. Engg., July,1912; p. 411; 1500 w*; 35c.

Pütz, O.—*Stand der Aufbereitung kiesiger Zink- und Bleierze in Oberschlesien;* [Present status of the dressing of pyritic and sulphide zinc-lead ores in Upper Silesia; read to Ges. Deu. Metallhütten & Bergleute; abstract].—Deu. Bergwerks Ztg., Oct.1, p. 1; 500 w; 35c.

Reddie, R.—*Recent Jig Design;* [Improved rougher jig and Heberle gate, treating zinc carbonate in dolomite].—Mines & Minerals, Oct.,1912; p. 170; 800 w*; 35c.

Rice, C. T.—*Device for Clearing Jig Grates;* [Joplin district, Mo.].—E. & M. J., July20,1912; p. 111; 800 w*; 25c.

Robertson, G. A.—*Hydraulic Classification of Pulp for Tube Milling.*—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 334; 2700 w; $1.

Rollandet, G. J.—*A Rotatory Concentrating Table;* [G. M. Gross patent].—Mng. Sci., Oct.24, p. 264; 1000 w; 35c.

Sanna, R.—*Cernitori magnetici della miniera di Aquaresi;* [Magnetic concentration of calcined calamine at the Aquaresi mine, Sardinia].—Asso. Mineraria Sarda, R-C; June23,1912; p. 5; 400 w*; 50c.

Schmitt, C. O.—*Textbook of Rand Metallurgical Practice, Vol. II: Part 1, The Design and Construction of Reduction Plants.*—Johannesburg, London, Philadelphia; 1912; pp. 350; 335 figs; $6.50 (book).

Schneider, G. W.—*Concentration at the Butte and Superior Mill;* [From "Rocky Mountain News"].—M. & S. P., June29, 1912; p. 893; 500 w; 20c. Also in Mines & Minerals, Oct., p. 160; 1000 w; 35c.

Scholtze, G.—*Wechselstrom Erz-Setzmaschine;* [Alternating current electromagnetic jigs].—Kohle & Erz, June24,1912; p. 650; 1000 w*; 35c.

Scholtze, G.—*Das Flotations-Schwimm-Verfahren zum Aufbereiten armer Erze und Schlämme;* [Flotation process for treating low-grade ores and slimes].—Kohle & Erz, Aug.5,1912; p. 803; 600 w; 35c.

Shubert, B.—*Retarding the Flow of Coal on Shaking Screens.*—Coal Age, Oct.5, p. 460; 100 w*; 20c.

Shubert, B.—*Simple Method of Jacketing a Revolving Screen.*—Coal Age, Aug.31, 1912; p. 290; 150 w; 20c.

Stadler, H.—*The New Metallurgy* [on the Rand]. (Jnl. Chem. Met. & Mg. Soc., S. A.; abstract).—W. A. Mg., Bldg. & Eng. Jnl., Oct.5,1912; p. 12; 5000 w; 35c.

Stadler, H.—*Uniformity in Grading Analyses;* [Proposed mathematical grading of Inst. of Mng. & Met'gy standard screens].—S. Afr. Mng. Jnl., Sept.7,1912; p. 15; 1000 w; 35c.

Stoek, H. H.—*Geology, Mining and Preparation of Anthracite.*—Western Soc. of Engrs., Jnl.; Oct.,1912; p. 705-735*; 65c.

Strassner, —. *L'atelier de préparation des minerais de zinc et de plomb de Diepenlinchen;* [The Diepenlinchen lead-zinc mill near Stolberg, Germany; French abstract from "Metallurgie," 1911; pp. 645-650].—Rev. de Métal'gie, June,1912; p. 319; 1000 w; $1.15.

Taylor, E. C.—*Problems in the Washing of Coal.*—Coal Age, Oct.26, p. 570; 2100 w*; 20c.

Tench, S. V.—*Preparation of Anthracite Coal;* [Read to Panther Valley Mng. Inst.].—Coal Age, Nov.16, p. 681; 2100 w; 20c.

Tupper, C. A.—*Ore-Washing Plant of the Wisconsin Steel Co.*—Mining & Engg. World, July13,1912; p. 49; 2400 w*; 10c.

Tys, A. T.—*Comparative Method of Screen Analysis;* [System at Cananea Cons. Copper Co. mill].—M. & S. P., Sept.14,1912; p. 339; 2000 w; 20c.

Van Brussell, J. B.—*Magnetic Dressing of Tin Ores.*—E. & M. J., Nov.23,1912; p. 988; 1500 w*; 25c.

Vivian, G. T.—*Centrifugal Machines for Re-Grading and Ore Concentrating;* [Wm. Gee process].—Amer. Inst. Mng. Engrs., Bull. 70, Oct.,1912; pp. 1103-1110*; $1.15. Abstract in Mining & Engg. World, Apr. 20,1912; p. 867; 2000 w*; 10c.

Wasson, Albert.—*Treatment of Tin Ore in Cornwall.*—E. & M. J., Nov.23,1912; p. 979; 1200 w; 25c.

Watson, R. B.—*Nipissing High-Grade Mill, Cobalt, Ont.*—E. & M. J., Dec.7,1912; p. 1077; 3500 w*; 25c.

Wentworth, H. A.—*Electrostatic Concentration or Separation of Ores;* [Reviews Huff process at various U. S. and Mexican mills].—Amer. Inst. Mng. Engrs., Bull. 66, June,1912; pp. 633-648*; $1.15.

Wiard, Edw. S.—*Some Problems of Ore Concentration;* [1: Sampling; Pulp screening].—Mng. Sci., Sept.26,1912; p. 196; 2500 w; 20c.

Wilson, H. M.—*Coal Washing and Pollution of Streams.*—Sanitary Record, Vol. 50, 1912; p. 131; 50c.

Wood, H. E.—*The Wood Flotation Process;* [with tests on molybdenum, lead, zinc, copper, gold, silver, bismuth, antimony and other ores].—Amer. Inst. Mng. Engrs., Bull. 71; Nov.,1912; pp. 1227-1244*; $1.15.

Wright, E. T.—*Concentration with Woodbury Classifier and Jigs;* [Use on Lake Superior copper ores].—E. & M. J., Sept.28, 1912; p. 608; 1000 w*; 25c. Also in Mining & Engg. World, Sept.28, p. 575; 1500 w*; 10c.

"Brychan."—*Washing and Sorting Small Coal in Wales.*—Sci. & Art of Mng., Aug. 31.1912; p. 32; Sept.14, p. 54; 2000 w*; 50c.

———. *A New Gravel Washing Screen;* [Dull & Co. system].—Rock Products, Aug., 1912; p. 44; 500 w*; 30c.

———. *A 3000-yd. Washing Plant;* [World's largest gravel-washery at Rockdale, near Joliet, Ill.].—Rock Products, Oct.22, p. 44; 1000 w*; 30c.

———. *Coal Washing and Briquetting;* [No. 2 Hibernia Mine, Germany].—Mines & Minerals, Nov., p. 193; 1800 w*; 35c.

———. *Coal-Washing and Screening Plant at Abergorky Colliery, S. Wales.*—Iron & Coal Trades Rev., Nov.8, p. 756; 1000 w*; 35c.

———. *Concrete and Steel Coal Washery;* [Panama, Ill.].—Engg. Record, Oct. 26, p. 465; 1200 w*; 20c.

———. *Costs of Hand-Sorting and Developing at the Ferreira Deep, Rand.*—E. & M. J., June22,1912; p. 1225; 250 w; 25c.

———. *Concentration of Molybdenite Ores;* [Notes on Australian practice].—Mng. & Engg. Rev., May,1912; p. 336; 500 w*; 35c.

———. *Deslogc Picking Shaker;* [at Cons. Lead Co. mines, southeast Missouri].—E. & M. J., Nov.9, p. 883; 900 w*; 25c.

———. *Developments at Cortonwood Colliery;* [Humboldt coal-washing plant].—Iron & Coal Trades Rev., May24,1912; p. 833; 1000 w*; 35c.

———. *"Dortmund" Washery at the Holbrook Colliery.*—Iron & Coal Trades Rev., July5,1912; p. 1; 2000 w*; Supplement plate; 35c.

———. *Dry Cleaning of Coal at a Franklin County Mine;* [Spiral separators at Wilmington Star Mng. Co. screening plant, Illinois].—Black Diamond, Aug.3, 1912; p. 18; 8000 w*; 35c.

———. *Edison's New Method of Ore Separation.*—Mines & Methods, June.1912; p. 507; 2500 w*; 25c.

———. *Ein neues elektrisches Tonreinigungsverfahren;* [New electro-osmotic process for washing kaolin and clays].—Ton Industrie Ztg., Aug.8,1912; p. 1283; 1000 w*; 35c.

———. *German Picking Table in America.*—Bl. Diam., Dec.7,1912; p. 19; 750 w*; 30c.

———. *Gravel Washing and Crushing Plant;* [Ohio Ballast Co., Columbus, O.].—Engg. Record, Oct.12, p. 404; 2000 w*; 25c.

———. *Greenside Mine, England;* [Lake district, Westmoreland; argentiferous lead mining and milling; slime plant].—E. & M. J., Sept.7,1912; p. 460; 1200 w; 25c.

———. *Hexagonal Trommel for Fine Pulp;* [at Desloge lead mill, Mo.]. -E. & M. J., Nov.2, p. 833; 900 w; 25c.

———. *Iron Ore Concentration in Minnesota;* [Describes various plants].—Met. & Cheml. Engg., Nov.,1912; p. 717; 2000 w*; 35c.

———. *Magnetic Separators;* [Discusses Ruthenburg separator, and separation without previous concentration].—Mines & Minerals, July,1912; p. 749; 1000 w*; 35c.

———. *Metallurgy of the Rand Banket;* [Brief outline of gold-ore treatment on Rand; sizing, sorting, stamp milling, tube mills, etc.].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; pp. 177-198; 16,000 w*; $1.

———. *Milling at the Butte and Superior.*—M. & S. P., June29,1912; p. 893; 500 w; 20c.

———. *New British Coal Washing Plant;* [Pulsating jig washer at Lamb colliery, Northumberland].—Coal Age, Aug. 10,1912; p. 185; 1000 w*; 20c.

———. *New Gravel-Washing Process;* [R. W. Dull scrubbing-cylinder system].—Rock Products, Oct.22, p. 43; 200 w*; 30c.

———. *New Screening Plants at Church Gresley Colliery;* ["Etna" oscillating screens].—Iron & Coal Trades Rev., Nov.1, p. 710; 1600 w*; 35c.

———. *Notable Tendencies in the Best Milling Practice;* [Rough concentration followed by cleaning machines; classification immediately after crushing].—Mining & Engg. World, Oct.12, p. 701; 600 w; 10c.

———. *Oberstrom Modification of Harz Jig;* [In use in southeastern Missouri lead district].—E. & M. J., Aug.24,1912; p. 351; 1000 w*; 25c.

———. *Overstrom Jig Eccentrics.*—E. & M. J., July27,1912; p. 160; 1000 w*; 25c.

———. *Plants for Washing Lean Iron Ores;* [Describes several plants in Superior districts].—Engg. News, Sept.5,1912; p. 449; 1000 w; 25c.

———. *Power Plant of Ore Washery.*—Ir. Age, Nov.21,1912; p. 1206; 1000 w*; 30c.

———. *Recent Copper Milling Practice at Lake Superior.*—Met. & Chem. Eng., Dec.,1912; p. 795; 6000 w*; 35c.

———. *Reclaiming Anthracite Coal from Rivers;* [Reworking outwashed coals in rivers below old culm piles and collieries].—Black Diamond, Sept.7,1912; p. 20; 2000 w*; 30c.

———. *The Caldecott Diaphragm Cone Classifier.*—E. & M. J., Aug.10,1912; p. 257; 1600 w*; 25c.

———. *The Deverell Gold Saving Machine.*—Mining & Engg. World, July20, 1912; p. 124; 450 w; 10c.

———. *The Major Classifier.*—E. & M. J., Nov.23,1912; p. 977; 800 w*; 25c.

———. *The Pacific Vanner;* [Improved Frue vanner].—E. & M. J., Aug.3,1912; p. 220; 500 w*; 25c.

———. *The Problem of Fines in Smelting.*—M. & S. P., Oct.5,1912; p. 425; 1200 w; 20c.

———. *Thornthwaite Mine, England;* [Silver-lead-zinc mine and milling, Lake district, Cumberland].—E. & M. J., Aug. 10,1912; p. 270; 1000 w; 25c.

———. *Tin Dressing Losses in Cornwall.*—Mng. Jnl., Aug.3,1912; p. 786; 500 w; 35c.

———. *The Miami Concentrator.*—M. & S. P., Nov.9, p. 600; 1000 w*; 20c.

———. *Tin Ore Dressing and Metallurgy.* Mines & Minerals, Sept., p. 89; 2000 w*; 35c.

———. *Torbrook Iron Deposits;* [Tor-

brook, N. S., mines and concentrating mill]. —Canadian Mng. Jnl., Sept.15,1912; p. 637; 3500 w*; 35c.

———. *Trommel for Coarse Dry Ore;* [Doe Run Lead Co., Mo.].—E. & M. J., Oct. 12, p. 689; 800 w*; 25c.

———. *Westphalian Coal Screening and Washing Plant;* [Rheinpreussen colliery]. —Iron & Coal Trades Rev., Sept.27,1912; p. 463; 700 w; 35c.

———. *Woodbury Slime Classifying Jig for Iron Ore.*—Iron Trade Rev., Sept.26, 1912; p. 588; 1500 w*; 20c.

AMALGAMATION

Rickard, T. A.—*Cyanidation-Amalgamation;* [at Cobalt, Ontario].—Mng. Mag., June,1912; p. 452; 1000 w; 45c.

Schmitt, C. O.—*Textbook of Rand Metallurgical Practice. Vol. II: Part 1, The Design and Construction of Reduction Plants.*—Johannesburg, London, Philadelphia; 1912; pp. 350; 335 figs; $6.50 (book).

St. Ranier, —. *Amalgamationsversuche mit Golderzen der Hohen Tauern;* [Amalgamation tests with some gold ores from the High Tauer Mtns., Austria].—Oestr. Zts. f. Berg- & H-wesen, Sept.7, p. —; Sept.14, p. 527-528*; Sept.21, p. 542-544*; Sept.28, pp. 554-557*; 95c.

———. *An Adjustable and Movable Amalgamation Table.*—E. & M. J., June22, 1912; p. 1232; 400 w*; 25c.

———. *Mercury Trap for Amalgamation Tables.*—E. & M. J., Sept.7,1912; p. 443; 400 w*; 25c.

———. *Metallurgy of the Rand Banket;* [Brief description of Rand recovery processes].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; pp. 177-198; 16,000 w*; $1.

———. *North Star Amalgamation Tables.*—E. & M. J., June29,1912; p. 1270; 500 w*; 25c.

———. *Quicksilver Consumption at Alaska Mills;* [Treadwell, United, and Mexican]. —E. & M. J., July20,1912; p. 113; 800 w; 25c.

———. *Rand Amalgamation Tables.*— E. & M. J., Oct.12, p. 690; 400 w*; 25c.

———. *Shaking Amalgamation Tables for Tube Mill Circuit;* [Rand practice].— E. & M. J., July13,1912; p. 63; 1100 w*; 25c.

———. *Shaking Amalgamation Table.*— E. & M. J., Aug.31,1912; p. 400; 400 w*; 25c.

———. *Where the Output Comes From;* [Amalgamation and cyanide yields compared].—S. Afr. Mng. Jnl., Aug.24,1912; p. 954; 1000 w; tables; 35c.

CYANIDING

Allen, A. W.—*Premature Precipitation.*— Mng. Mag., Oct., p. 294; 400 w; 45c.

Allen, A. W.—*Concentration vs. Cyanidation.*—Mng. Mag., July,1912; p. 43; 1000 w; 35c.

Alley, J. E.—*Agitating Concentrate;* [at Homestake mine, Neal, Idaho].—M. & S. P., July27,1912; p. 118; 500 w*; 20c.

Almy, C., Jr., and W. K. Lewis.—*Factors Determining the Capacity of a Filter Press.* —Jnl. of Indl. & Engg. Chem'y, July,1912; p. 528; 2800 w*; 65c.

Anderson, W.—*Mine Tributing in Rhodesia;* [Mining and metallurgic practice in leased gold mines].—Cheml. Met. & Mng. Soc. of S. Afr., Jnl.; June,1912; p. 513; 1000 w; 90c.

Reprint in S. Afr. Engg., Aug.,1912; p. 22; 35c.

Argall, P. H.—*Milling Sulpho-Tellurides at Cripple Creek;* [Mining, milling and cyaniding the dumps].—Mex. Mng. Jnl., Nov., p. 27; 2400 w*; 25c.

Banks, Chas. A.—*A Tailing Plant;* [Waihi-Paeroa 500-ton per day plant for cyaniding sands of Ohinemuri river outwashed from Waihi and Karangahake gold districts, N. Z.].—Mng. Mag., Aug.,1912; p. 121; 1500 w*; 45c.

Barbour, P. E.—*Iola Cyanide Mill; Candor, N. Carolina.*—E. & M. J., Sept.14,1912; p. 505; 4000 w*; 25c.

Beals, R.—*Treatment by Cyanide of Gold and Silver Ores Containing Copper* [in excess of 0.05%].—Mex. Mng. Jnl., Nov., p. 31; 1600 w; 25c.

Bettel, Wm.—*The Cyanide Process on the Rand.*—S. Afr. Mng. Jnl., Anniversary No., Sept., 1912; p. 267; 9000 w*; $1.

Beutel, —. *Ueber die uusammensetzumg der Ferrocyankalischen Goldbäder;* [Composition of potassium-ferrocyanide gold baths].—Zts. f. angew. Chemie, May17, 1912; pp. 995-998; 50c.

Buskett, E. W.—*Cyanidation of the Granite-Bimetallic Tailings;* [Phillipsburg, Mont.; 1,000,000 tons of $3 silver tailings]. —Mining & Engg. World, Aug.17,1912; p. 283; 4500 w*; 10c.

Buskett, E. W.—*Laboratory Pulp Agitator.*—E. & M. J., Aug.3,1912; p. 207; 300 w*; 25c.

Clark, Allan J., and Sharwood, W. J.— *Metallurgy of the Ores of the Homestake Mine, So. Dakota.* (Bulletin 98, Inst. Mg. & Met.; abstract).—Mg. & Eng. World, Dec. 7,14,21,28,1912; 12,000 w*; 40c.

Clennell, J. E.—*Estimation of Lead in Cyanide Solutions.*—Mex. Mg. Jnl., Dec., 1912; p. 17; 1800 w; 25c.

Clennell, J. E.—*Lead Salts in Cyanide Treatment.*—E. & M. J., Sept.28,1912; p. 597; 2100 w; 25c.

Coghill, W. H.—*Laboratory Agitating Apparatus.*—E. & M. J., Aug.17,1912; p. 600 w*; 25c.

Coghill, W. H.—*Copper and Sulphur in Cyanide Solution;* [Difficulties in silver extraction].—M. & S. P., Aug.17,1912; p. 203; 2700 w; 20c.

Cowles, R. K.—*Precipitation of Gold and Silver by Carbon.* (Proc. Aust. Inst. M. E.).—M. & S. P., Dec.7,1912; p. 730; 1800 w*; 20c.

Cunningham, N.—*Cyanidation of Concentrate.*—M. & S. P., Nov.16, p. 634; 400 w; 20c.

Dobbins, W., and H. Anderson.—*Buffalo Mine and Mill, Cobalt, Ont.*—E. & M. J., Aug. 3, 1912; p. 2; 6500 w*; 25c.

Durant, H. T.—*Pump Suctions from Cyanide Tanks.*—E. & M. J., July27,1912; p. 159; 500 w*; 25c.

Durant, H. T.—*Making Up Solutions;* [Use of calculation tables].—E. & M. J., July13,1912; p. 64; 200 w; 20c.

Forbes, D. L. H.—*Treatment of Complex Silver Ore at the Lucky Tiger Mine, El Tigre, Sonora, Mex.*—Amer. Inst. Mng. Engrs., Bull. 68, Aug.,1912; pp. 769-810*; $1.15.

Friese, Fr.—*Neuere Versuche aus dem Gebiete der Aufbereitung goldhaltiger Erze, vornehmliche Pyrite;* [Researches in the

metallurgy of auriferous, especially pyritic, ores; roasting; cyanide losses; effect of cyanide on foreign metals; Black-Etard permanganate process; Sulman-Teed or potassium bromocyanide process; precipitation].—Oestr. Zts. f. Berg- & H-wesen, Apr.27,1912, p. 227; May4, p. 241; May11, p. 260; May18, p. 270; 9000 w*; $1.50.

Gieser, H. S.—*Benoni Mine and Mill on the Rand.*—E. & M. J., July6,1912; p. 23; 3600 w*; 25c.

Gilser, H. S.—*Brakpan Mines, Ltd., Electrically Operated Cyanide Mill.*—Mines & Minerals, Oct.,1912; p. 156; 2100 w*; 35c.

Goosman, J. G.—*The Waihi Mill, N. Z.; Ore Reduction and Cyaniding.*—Australian Mng. Standd. Aug.8,1912; p. 132; 1000 w; 35c.

Green, M.—*A Research Upon a Refractory Gold Ore.*—Cheml. Met. & Mng. Soc. of S. Afr., Jnl.; Sept.,1912; pp. —; 95c. Abstract in S. Afr. Mng. Jnl., Sept.28, p. 111; 2000 w; 35c.

Grothe, A., and Salazars, L.—*La Industria Minera de México: Tomo I—Estados de Hidalgo y de México;* [The mining industry of Mexico: Vol. I—States of Hidalgo and Mexico].—Mexico City, 1912; 304 pp; $1.50.

Guppy, P. L. and D. Waterman.—*Separation of Base Metals in Cyanide Solution for Quantitative Determination.*—M. & S. P.,Nov.9, p. 597; 1000 w; 20c.

Hart, J. P., and H. L. Williams.—*West End Consol. Mill, Tonopah;* [All-sliming plant extracting 90.4% on $17 silver ore at cost of $3.52 per ton].—E. & M. J., July27, 1912; p. 163; 4500 w*; 25c.

Hendryx, Wilbur A.—*Slime Agitation on the Rand.*—Mg. Sci., Dec.5,1912; p. 365; 1000 w; 20c.

Hixon, Hiram W.—*Smelting Cyanide Precipitate.*—E. & M. J., Nov.30,1912; 1027; 1000 w*; 25c.

Hutchinson, J. W.—*Lime in Cyanidation;* [Goldfield Consbl. mill, Nevada; crushing in water vs. crushing in solution].—E. & M. J., July27,1912; p. 170; 1500 w; 25c.

Irvin, Donald F.—*Disposal of Tailing at El Tigre, Sonora, Mex.*—M. & S. P., Dec. 7,1912; 727; 2500 w*; 20c.

Jacquier, G.—*Approximate Losses of Gold and Zinc in the Zinc Sulphate Solution by the Principal Groups of Mines on the Rand.*—S. Afr. Mng. Jnl., Aug.24,1912; p. 962; 500 w; 35c.

James, Alfr.—*The Forcing of a Process;* [Early history of cyanide process].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 37; 5000 w; $1.

Johnston, A. McA.—*Investigation of Magnetically Separated Iron from Mill Pulp.*—Cheml. Met. & Mng. Soc. of S. Afr., Jnl.; Aug.,1912; p. 50; 3000 w; 90c.
Abstract in M. & S. P., Oct.12, p. 463; 2500 w; 20c.

Julian, H. F.—*Slime Filtration and Cyaniding;* [Discusses development and present status and use of Butters equipment].—London, 1912; 62 pp*; 20c.

Kennedy, J. C.—*The Associated Mill, Manhattan, Nevada.*—M. & S. P., July27, 1912; p. 108; 2200 w*; 20c.

Kühn, E.—*Die chemischen Vorgänge bei der Cyanlaugung von Silbererzen;* [Chemical reactions in the cyanidation of silver ores].—Halle, 1912; 108 pp; 34 figs; $2.50 (book).

Kuhn, E.—*Considérations chimiques sur la cyanuration des minerais d'argent;* [Chemical considerations in the various processes of cyaniding silver ores; French abstract from "Metallurgie," 1911, pp. 399-404, 421-436, 464-472, 481-492].—Rev. d. Métal'gie, June,1912; p. 313; 2100 w*; $1.15.

Linton, R.—*Notes on the Cyaniding of Concentrate.*—Cheml. Met. & Mng. Soc. of S. Afr., Jnl.; July,1912; p. 14; 1200 w; 90c.

Longbottom, W. A.—*Cyanidation of Antimonial Tailings at Hillgrove, N. S. W.*—Mng. & Engg. Rev., May,1912; p. 333; 2100 w*; 35c.

Martin, Al. H.—*Treatment of Gold Concentrates;* [Chlorination vs. cyaniding in California; Nevada; Alaska].—Mines & Methods, July,1912; p. 537; 300 w; 20c.

McMiken, S. D.—*Cyanidation at Komata Reefs Mill, Hauraki, N. Z.*—Mex. Mng. Jnl., Nov.,1912; p. 19; 5000 w; 25c.

MacDonald, B.—*Veta Colorado Mill and Cyanidation Plant;* [Parral, Chihuahua].—M. & S. P., July6,1912; p. 4; July13, p. 40; 7000 w*; 30c.

Megraw, Herbert A.—*Cyaniding at the Dome Mill, Ont.*—E. & M. J., Nov.23,1912; p. 983; 4000 w*; 25c.

Megraw, H. A.—*Cyaniding Troubles and Remedies.*—E. & M. J., Aug.17,1912; p. 311; Aug. 24, p. —; 12,000 w; 40c.

Megraw, H. A.—*Cyanidation in the Cobalt District, Ont.*—E. & M. J., Nov.2, p. 837; 5000 w*; 25c.

Michailenko, Y. I., and M. I. Meshtscherjakoff.—*Effect of Agents on Solubility of Gold in Cyanide Solutions;* [From Russian Physl-Cheml. Soc., Jnl., 1912, pp. 567-570; brief synopsis].—Mining & Engg. World, Aug.31,1912; p. 395; 350 w; 10c.

Morrisby, P. T.—*Minor Improvements in Cyanide Practice.*—Cheml. Met. & Mng. Soc. of S. Afr., Jnl.; Aug.,1912; p. 45; 3000 w*; 90c.

Muir, L. S.—*Cyanide Treatment on the "Big Plant" Principle; Central Cyanide Stations a Possibility of the Future.*—S. Afr. Mng. Jnl., Anniversary No., Sept., 1912; p. 333; 24000 w; $1.

Nagel, O.—*Auslaugungsversuche;* [Experimental tests with form of tank, agitation, etc., in the leaching of ores].—Chemiker Ztg., July9,1912; p. 780; 1200 w*; 35c.

Nicholas, A. M.—*Slime Filtration and the Nichlas Filter Wheel.*—Amer. Inst. Mng. Engrs., Bull. 68, Aug.,1912; p. 887; 400 w*; $1.15.

Parks, J. R.—*Parks Electro-Cyanide Process.*—Columbia School of Mines Quar'ly, July,1912; pp. 365-372*; 65c.

Randall, J.—*Practical Cyaniding.*—Mines & Minerals, Aug.,1912; p. 42; Sept., p. —; 10,000 w; Dec; 1700 w*; $1.05.

Reece, F. B.—*Cyanidation of Pyritic Ore.*—M. & S. P., July20,1912; p. 77; 1200 w*; 10c.

Rhodes, C. E.—*Lime in Cyanidation.*—E. & M. J., Aug.10,1912; p. 251; 1600 w; 25c.

Rickard, T. A.—*Cyanidation-Amalgamation;* [at Cobalt, Ontario].—Mng. Mag., June,1912; p. 452; 1000 w; 45c.

Rothwell, J. E.—*Advanced Cyanide Practice;* [Rothwell-Lowden countercurrent continuous agitator].—Met. & Cheml. Engg., Sept.,1912; p. 564; 1000 w*; 35c.

Schmitt, C. O.—*The Design and Construction of Reduction Plants;* (2) *The Transport of Materials;* [Rand Metallurgical Practice, Vol. II].—Johannesburg,

London, and Philadelphia; 1912; 438 pp; 434 figs; $6.50 (book).

Schwarzkopf, P.—*Beiträge zur Kenntnis der komplexen Eisencyanverbindungen mit besonderer Berücksichtigung der Bildung Nitroprussid;* [Notes on the complex iron-cyanide compounds with special reference to the nitroprussides].—Vienna, 1912; 55 pp.; $2; (book).

Smith, H. G.—*Operating a Stationary Filter;* [Concheno mill].—M. & S. P., Oct.19, p. 501; 700 w; 20c.

Stadler, H.—*Hendryx Agitator;* [Critical notes on results of Rand Mines Trials Committee].—S. Afr. Mng. Jnl., Aug.10, 1912; p. 895; 1000 w; 35c.

Tremoureux, R. E.—*A Successful Treatment of Concentrates by Cyanidation.*—Mex. Mg. Jnl., Dec.,1912; p. 18; 1200 w; 25c.

Trent, L. C.—*Cyaniding Without Filters;* [300-ton plant for La Junta mill, with continuous replacing decanter and washer].—Los Angeles Mng. Rev., July13,1912; p. 7; 1000 w; 20c.

Tweddy and Beals.—*Milling Costs, Minas del Tajo, Sinaloa.*—See under Silver.

Urquhart, Charles H.—*The Black Oak Mill, Calif.*—M. & S. P., Nov.30,1912; p. 687; 3000 w*; 20c.

Vestal, F. A.—*Cyaniding Plant at the Empire Mines, Grass Valley, Cal.*—M. & S. P., Nov.9, p. 586; 4500 w*; 20c.

"Viajero."—*Lead Salts in Cyanide Treatment.*—E. & M. J., Nov.16, p. 921; 300 w; 25c.

Watson, R. B.—*Nipissing High-Grade Mill, Cobalt, Ont.*—E. & M. J., Dec.7,1912; p. 1077; 3500 w*; 25c.

Watson, J.—*Action of Mineral Sulphates and Arsenates on Cyanide Solutions;* [Discussion of Crosse's paper].—Cheml. Met. & Mng. Soc. of S. Afr., Jnl.; Aug.,1912; p. 55; 1500 w; 90c.

Weber, M. G.—*Effect of Electric Current on Cyanide Solutions;* [Read to Electroplaters' Asso.].—Mining & Engg. World, Aug.24,1912; p. 340; 1000 w; 10c.

Weisser, F.—*Die Bestimmung der Cyanverbindungen im Gaswasser;* [Determination of cyanide compounds in gas-works waters and coking by-products].—Chemiker Ztg., Nov.2, p. 1285; 3000 w; 35c.

Wetherald, F. H.—*Clarifying Cyanide Solutions.*—E. & M. J., Nov.9, p. 884; 700 w*; 25c.

White, H. A.—*Evolution in Metallurgy;* [Old and new ideas in Rand practice].—S. Afr. Mng. Jnl., Anniversary No., Sept., 1912; p. 59; 2400 w; $1.

Williams, H. E.—*A New Method for the Estimation of Ferrocyanides;* [From Soc. of Cheml. Ind'y, Jnl., Vol. 41, pp. 469-471].—Mining & Engg. World, Oct.26, p. 755; 800 w*; 10c.

Williamson, W. D.—*Regeneration of Cyanide Solutions.*—Cheml. Met. & Mng. Soc. of S. Afr., Jnl.; April,1912; p. 403; 500 w; 90c.

Abstract in M. & S. P., July13,1912; p. 49; 800 w; 20c.

Young, George J.—*Testing the Filtration Rate of a Slime.*—Mex. Mg. Jnl., Dec.,1912; p. 36; 2000 w*; 25c.

Mines Trials Committee (Rand).—*Hendryx Agitator; Results of Tests.*—S. Afr. Mng. Jnl., July27,1912; p. 818-819; 2000 w; tables; 35c.

———. *A Mining and Metallurgical Journey;* [Describes Republic district, Washington; gold mines and N. Washington mill].—N. W. Mng. News, Aug.,1912; p. 80; 4500 w*; 35c.

———. *Cyanidation at Treadwell;* [Operating costs, May16-Dec.31,1911].—M. & S. P., June29,1912; p. 893; 500 w; tables; 20c.

———. *Extraction Results and Reduction Costs;* [Comparative data from several Rand mines].—S. Afr. Mng. Jnl., July6, 1912; p. 693; 1000 w; tables; 35c.

———. *Gitsham Gold Extraction Co. Process;* [Selective action of hydrocyanic acid with regeneration of cyanide].—Australian Mng. Standd., Aug.22,1912; p. 179; 500 w; 35c.

———. *Intermittent or Continuous Agitation.*—E. & M. J., Aug.24,1912; p. 337; 500 w; 25c.

———. *Leaching vs. Total Sliming.*—E. & M. J., Oct.26, p. 771; 600 w; 25c.

———. *Metallurgy of the Rand Banket;* [Brief description of gold recovery processes on the Rand; sizing; sorting; stamp milling; amalgamation; tube milling; cyaniding].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; pp. 177-198; 16,000 w*; $1.

———. *Moore Filter Co. Wins Slime Filter Case;* [Salient features of the recent court decision against the Tonopah-Belmont Co.].—Mg. & Eng. World, Nov.23, 1912; p. 945; 3000 w; 10c.

———. *Painting Wooden Cyanide Tanks.*—E. & M. J., Aug.24,1912; p. 351; 400 w; 25c.

———. *Progress of Sand and Slime Agitation;* [Proposed combination treatment; trials at Wolhuter mine; Paterson and Hendryx agitators].—S. Afr. Mng. Jnl., May25,1912; p. 458; 1500 w; 35c.

———. *Recent Copper Milling Practice at Lake Superior.*—Met. & Chem. Eng., Dec.,1912; p. 795; 6000 w*; 35c.

———. *Retreatment of Sand Residues;* [Stanley classifier to re-treat 600,000 tons at Bonanza dump, Rand].—S. Afr. Mng. Jnl., June29,1912; p. 649; 2000 w; 35c.

———. [*Some Rand Mines; Their Ore Bodies, Mining, Reduction and Treatment Practice.* See under Gold.

———. *The Caldecott Sand Filter Table.*—E. & M. J., July6,1912; p. 15; 1200 w*; 25c.

———. *The Hendryx Agitator on the Rand.*—M. & S. P., Nov.9, p. 599; 600 w; 20c.

———. *The Ophir Cyanidation Plant* (Nevada).—M. & S. P., Nov.30,1912; p. 703; 700 w; 20c.

———. *The Van Ryn Deep's Equipment;* [80 stamps, 8 tube mills, 20-ton filter plant, mill layout, etc.].—S. Afr. Mng. Jnl., Sept. 21, p. 75; 2000 w*; 35c.

———. *Where the Output Comes From;* [Amalgamation and cyanide yields compared].—S. Afr. Mng. Jnl., Aug.24,1912; p. 954; 1000 w; tables; 35c.

Slimes

Browne, R. S.—*Method for Calculating Recovery of Dissolved Values from Slime;* [Standardizing committee of Amer. Met'g'l Soc.; discussion].—Mining & Engg. World, Aug.3,1912; p. 203; 1500 w; 10c.

Cowan, H. W.—*How to Obtain Efficiency from Pressure Filters;* [Read to Canadian Public Health Asso., Sept., 1912; abstract].—Canadian Engr., Sept.26,1912; p. 523; 2400 w; 25c.

Downey, C. J.—*Multiple-Deck Concentration of Slimes;* [New Willfley large capacity slime tables].—Mng. Sci., July25,1912; p. 52; 2800 w*; 20c.

Julian, H. F.—*Slime Filtration and Cyaniding;* [Discusses development and present status and use of Butters equipment].—London, 1912; 62 pp*; 20c.

Kaeding, H. B.—*Winding the Oliver Filter Drum.*—E. & M. J., Oct.5,1912; p. 639; 1100 w*; 25c.

Krom, S. A.—*The James Diagonal-Plane Slimer.*—Amer. Inst. Mng. Engrs., Bull. 66; June,1912; pp. 649-654*; $1.15.

Jakin, C. H.—*Settling El Tigre Slimes.*—E. & M. J., Nov.9, p. 872; 600 w; 25c.

MacCoy, F.—*Esperanza-Federal Classifier.*—E. & M. J., Sept.28,1912; p. 591; 700 w*; 25c.

Martin, A. H.—*Canvas-Table Concentration in California.*—E. & M. J., Sept.21, 1912; p. 542; 1600 w*; 25c.

McLain, G. B.—*Specific Gravity Chart;* [To determine moisture and solids percentages in slimes].—M. & S. P., Aug.3, 1912; p. 150; 400 w*; 20c.

Mishler, R. T.—*Settling Slimes at the Tigre Mill.*—E. & M. J., Oct.5,1912; p. 643; 3600 w*; 25c.

Pütz.—*Zinc-Lead Ore Dressing in Silesia.* See Lead.

Stevens, B.—*Diagram for the Determination of the Solution Ratios of Slimes, and Calculations Made Therefrom.*—Mex. Mng. Jnl., Nov.,1912; p. 24; 700 w*; 25c.

Sweetland, E. J.—*The "Clam Shell" Filter.*—Met. & Cheml. Engg., Aug.,1912; p. 493; 2000 w*; 35c.

Symmes, W.—*The Mexican Mill, Virginia City, Nev.;* [All-sliming cyanidation without concentration nor amalgamation].—E. & M. J., Oct.12, p. 701; 4200 w*; 25c.

Traylor, B. W.—*Traylor Slime Filter;* [U. S. Pat. No. 1,029,155].—E. & M. J., Oct.5,1912; p. 652; 400 w*; 25c.

Waterman, D.—*Step-Bearing for Slime Agitator.*—M. & S. P., Sept.21,1912; p. 375; 500 w*; 20c.

———. *Canvas Tables of the Combination Mill, Goldfield, Nev.*—E. & M. J., Aug. 3,1912; p. 207; 1000 w*; 25c.

———. *Decision in Slime Filter Case;* [U. S. Circuit Court of Appeals decides in favor of Moore vs. Butters patents].—E. & M. J., Nov.16, p. 923; p. 917; 4000 w; 25c.

———. *Nevada Cons. Canvas Tables.*—E. & M. J., Aug. 17,1912; p. 301; 400 w*; 25c.

———. *The Caldecott Diaphragm Cone Classifier.*—E. & M. J., Aug.10,1912; p. 257; 1600 w*; 25c.

———. *The Rothwell Horizontal Vacuum Filter.*—Mining & Engg. World, Sept.21, 1912; p. 535; 400 w*; 10c.

Tube Mills and Fine Grinding

See Reduction: Crushing, etc.

CHLORINATION

Houben, H.—*Ueber die Löslichkeit von Metalloxyden und Metallsulphiden in geschmolzenem Natriumchlorid;* [The solubility of metallic oxides and sulphides in molten salt, sodium chloride; tin oxide, and lead, zinc and copper oxides and sulphides].—Metallurgie, Sept.22,1912; pp. 592-604*; 50c.

Martin, Al. H.—*Treatment of Gold Concentrates;* [Chlorination vs. cyaniding in California; Nevada; Alaska].—Mines & Methods, July,1912; p. 537; 3000 w; 20c.

Saunders, —. *Metallurgy at Mt. Morgan, Queensland.*—See Copper.

———. *The Bradley Process;* [Chloride roasting and chlorination to recover copper, gold and silver from waste slimes at Washoe, Montana].—M. & S. P., June15,1912; p. 822; 750 w; 20c.

MILL: MISCELLANEOUS AND GENERAL

Argall, P. H.—*Milling Sulpho-Tellurides at Cripple Creek;* [Mining, milling and cyaniding the dumps].—Mex. Mng. Jnl., Nov., p. 27; 2400 w*; 25c.

Behr, H. C., and C. F. Schmitt.—*A New Pulp Distributor;* [U. S. Pat. No. 1,020,251].—E. & M. J., June29,1912; p. 1269; 650 w*; 25c.

Blau, E.—*Kontrolle über Materialförderung und Materialverbrauch durch selbsttätige Wiegevorrichtungen;* [Mechanical control of the supply and consumption of crude materials by automatic weighing devices].—Kohle & Erz, Oct.14, p. 1042; 1200 w; 35c.

Bordeau, G.—*Réchauffeur d'air pour le séchage des produits céramiques;* [Air reheater for drying in clay works].—Rev. d. Materiaux, Oct.,1912; p. 110-B; 700 w*; 45c.

Connley, A.—*Construction of Machinery Foundations.*—Iron Age, July4,1912; p. 1; 3000 w*; 30c.

Davenport, F. B.—*The New Harleigh Breaker;* [Hazleton, Pa.].—Coal Age, Aug. 24,1912; p. 250-254; 2500 w*; 20c.

Del Mar, A.—*The Bishop Creek, Mill;* [Inyo county, Calif.].—M. & S. P., Nov.2, p. 561; 1000 w*; 20c.

Desoller, T. C.—*Rock-House Practice of the Quincy Mining Co.;* [Milling native copper; read to Lake Superior Mng. Inst.; abstract].—Mining & Engg. World, Sept.21, 1912; p. 529; 1800 w*; 10c.

Dobbins, W. J. and H. G. S. Anderson.—*Buffalo Mine and Mill, Cobalt, Ont.;* [Reviews mining and milling practice].—E. & M. J., Aug.3,1912; p. 211; 6500 w*; 25c.

Finlay, J. R.—*Mine Valuation;* [Read to N. Y. section, Mng. & Met'g'l Soc. of Amer., May16,1912; abstract].—E. & M. J., June 22,1912; p. 1238; 1600 w; 25c.

Forbes, D. L. H.—*Treatment of Complex Silver Ore at the Lucky Tiger Mine, Sonora.*—Amer. Inst. Mng. Engrs., Bull. 68, Aug., 1912; pp. 769-810*; $1.15.

Freise, F.—*Die Aufbereitung von Erzen und Kohlen;* [The dressing of ores and coal].—Leipzig, 1912; $2 (book).

Gieser, H. S.—*Benoni Mine and Mill on the Rand.*—E. & M. J., July6,1912; p. 23; 3600 w*; 25c.

Haenig, A.—*Die Steinkohle, ihre Gewinnung und Verwertung;* [Hard coals of Germany, mining dressing and utilization].—Leipzig, 1912; $1 (book).

Haldane, W. G.—*The Relation of an Ore Testing Plant to the Mining Industry;* [Read to Colo. Mng. & Met'g'l Asso.].—Mex. Mng. Jnl., Aug.,1912; p. 39; 2000 w; 25c.

Hale, F. A., jr.—*Yellow Pine Mill, Goodsprings, Nevada;* [Zinc-lead-silver].—E. & M. J., July13,1912; p. 68; 1500 w*; 25c.

Hart, J. P. and H. L. Williams.—*West*

End Consol. Mill, Tonopah; [All-sliming plant extracting 90.4% on $17 silver ore at cost of $3.52 per ton].—E. & M. J., July27, 1912; p. 163; 4500 w*; 25c.

Hausbrand, E.—*Drying by Means of Air and Steam.*—London, 1912 (2d edition); 80 pp; $2 (book).

Hodge, W. R.—*The Ahmeek Mill, Hubbell, Mich.*—E. & M. J., Oct.19, p. 749; 2800 w*; 25c.

Howard, L. O.—*Murray Mill of the Utah Ore Sampling Co.*—Salt Lake Mng. Rev., Oct.30, p. 15; 1800 w*; 25c.

Kennedy, J. C.—*The Associated Mill, Manhattan, Nevada.*—M. & S. P., July27, 1912; p. 108; 2200 w*; 20c.

MacDonald, B.—*Veta Colorado Mill and Cyanidation Plant;* [Parral, Chihuahua].—M. & S. P., July6,1912; p. 4; July13, p. 40; 7000 w*; 30c.

Mercer, H. T.—*Rock House Practice at Copper Range Properties;* [Read to Lake Superior Mng. Inst.; abstract].—Met. & Cheml. Engg., Oct.,1912; p. 680; 1600 w*; 35c. Also in Mich. College of Mines "Alumnus," July,1912. Also in E. & M. J., Aug. 24, p. 349; 1200 w; 25c.

Nicholl, J. S.—*Removing Moisture from Iron Ore;* [Tests of a rotary dryer at Buttsville, N. J.].—Mines & Minerals, July,1912; p. 734; 500 w; 35c.

Olmstead, G. C.—*Curves Used in Connection with an Ore-Drying Plant;* [Brunt iron mine, Mich.].—Mining & Engg. World, Sept.14,1912; p. 484; 300 w*; 10c.

Parmelee, M. C.—*Zinc Ore-Dressing in Colorado;* [Chiefly on magnetic separation, and roasting and drying].—Met. & Cheml. Engg., Sept.,1912; p. 527; 3200 w*; 35c.

Pütz.—*Zinc-Lead Ore Dressing in Silesia.*—See Lead.

Rice, C. T.—*A Cheaply Made Dewatering Wheel.*—E. & M. J., Oct.19, p. 737; 1000 w*; 25c.

Rice, C. T.—*Joplin Ore Bin Construction.*—E. & M. J., June22,1912; p. 1232; 1500 w*; 25c.

———. *New Plants at Broken Hill;* [N. S. W.; Junction North mill; describes crushing station, handling dump feeds, flotation, de-leading, power plant].—Mng Jnl., June15,1912; p. 614; 1000 w; 35c.

———. *Tailings Dewatering Wheel;* [at Rivermine, Mo., lead mills].—E. & M. J., Aug.31,1912; p. 399; 1000 w*; 25c.

———. *The World's Deepest Boreholes and Mines.*—S. Afr. Mng. Jnl., May25,1912; p. 463; 1000 w*; 35c.

TEXTBOOKS

Haenig, A.—*Die Steinkohle, ihre Gewinnung und Verwertung;* [High-grade bituminous coals; their mining and preparation].—Leipzig, 1912; pp. —*; $2; (book).

Richards, R. H. and C. E. Locke.—*Progress in Ore Dressing and Coal Washing in 1911.*—Mineral Industry, Vol. 20, 1912; pp. 809-872*.

Schmitt, C. O.—*The Design and Construction of Reduction Plants;* (2) *The Transport of Materials;* [Rand Metallurgical Practice. Vol. II].—Johannesburg, London and Philadelphia; 1912; 438 pp; 434 figs; $6.50 (book).

METALLURGY AND CHEMISTRY.

CHAPTER XV.

ELECTROMETALLURGY; ELECTROCHEMISTRY

Electromagnetic and Electrostatic Ore-Dressing

See Concentration (Mill and Milling).

Electrolysis.

Arrhenius, S.—*Theory of Solutions.*—New Haven, Conn.; 1912; 247 pp.; $2.25; (book).

Austin, W. L.—*Leaching Applied to Copper Ore; XX: Cost of Electrolytic Extraction of Copper from Its Ore.*—Mines & Methods, July,1912; p. 531; August, p. —; 8000 w; 30c.

Austin, W. L.—*Leaching Applied to Copper Ore;* 22: *Roasting Preparatory to Lixiviation.*—Mines & Methods, Sept.,1912; p. 9; 3600 w; 25c.

Bairsto, G. E. and R. Mercer.—*Some Properties of Aluminum Anode-Films.*—Faraday Soc., Trans., Vol. 7, Pts. 1-2; 1911; pp. 1-29; $4.25.

Bannister, C. O., and McNamara, W.—*Effect of Lime in the Determination of Lead.*—Mg. & Eng. World, Nov.30,1912; p. 1004; 750 w; 10c.

Benner, Raymond C.—*The Fixation of Atmospheric Nitrogen.*—Mg. & Eng. World, Nov.30,1912; p. 996; 1500 w; 10c.

Beutel, —. *Ueber die Zusammensetzung der Ferrocyankalischen Goldbäder;* [Composition of potassium-ferrocyanide gold baths].—Zts. f. angew. Chemie, May17, 1912; pp. 995-998; 50c.

Billiter, J.—*Die elektrolytische Alkalichloridzerlegung mit starren Metallkathoden;* [The electrolysis of alkaline chlorides using solid cathodes; processes and patents in U. S., U. K., and Germany].—Halle, 1912; 625 pp.; 189 figs.; $5.50; (book).

Blau, Ernst.—*Neuere Ausführungen von Drahtseilbahnen für Bergbau- und Hüttenswecke;* [New achievements in wire-rope tramways for mining and metallurgical purposes].—Montanist. Rundschau, Nov.16, 1912; p. 1205; 1500 w*; 35c.

Borchers.—*Metallurgic Progress, Aachen,* 1902-1912; [in German].—See Aluminum.

Brunck, O.—*Tantalelektroden;* [Tantalum electrodes as a substitute for platinum].—Chemiker Ztg., Oct.19, p. 1233; 1200 w; 35c.

Christensen, C. C.—*A Small Electrolytic Copper-Refining Plant;* [Equipment, power requirements, operation].—Mining & Engg. World, Sept.21,1912; p. 532; 1000 w; 10c.

Clamer, G. H., and Hering, Carl.—*The Electric Furnace for Brass Melting.*—Am. Inst. of Metals paper; 16 p.; 20c.

Coghill, Will H.—*Short-Order Lime Water for the Laboratory.*—Mg. & Eng. World, Nov.30,1912; p. 995; 10c.

Davies, F. H.—*Artificial Graphite and Electrolytic Processes;* [Use of graphite electrodes in electrolytic processes].—El. Rev. (London), Aug.23,1912; p. 293; 1600 w*; 35c.

Demare, F., and C. Jacobs.—*Sur les alliages et les dépots électrolytiques du radium;* [A radioactive silver-radium alloy, and the electrolytic deposition of radium].—Acad. d. Sciences Belg., Bull., 1912; p. 53-54.

Drucker, A. E.—*Mining Plants of the Oriental Con., Unsan., Korea.*—M. & S. P., Nov.23,1912; p. 652; 2500 w*; 20c.

Emrich, H. H.—*The Refining of Blister Copper;* [Fire refining and electrolytic].—Amer. Inst. Mng. Engrs., Bull. 66, June, 1912; pp. 611-632; $1.15.

Engelhardt, V.—*Zinkelektrolyse in wässriger Lösung;* [Review of progress and present status of electrolytic production of zinc with special reference to chloride and sulphate watery solutions with insoluble anodes; Siemens-Halske process; read to Ges. Deu. Metallhütten & Bergleute; abstract].—Deu. Bergwerks Ztg., Oct.1, p. 1; 400 w; 35c.

French, A. G.—*French's Electrolytic Zinc Process;* [Outline of treatment of Slocan, B. C., silver-lead-zinc ores at Nelson].—Canadian Mng. Jnl., July15,1912; p. 475; 500 w; 25c.

Freundlich, H., and J. Fischer.—*Ueber den Einfluss von Kolloiden auf die elektrolytische Abscheidung des Bleies;* [Influence of colloids on the electrolytic separation of lead].—Zts. f. Elektrochemie, Oct. 15, p. 885; 4000 w; 45c.

Goosman, J. B.—*Refining Cyanide Precipitate at Waihi, N. Z.;* [from Australian Mng. Standd.].—Mex. Mng. Jnl., Sept.,1912; p. 26; 600 w; 25c.

Greenawalt, Wm. E.—*The Hydrometallurgy of Copper; I: Roasting; II: Hydrometallurgical Process.*—N. Y. and London; 1912; 504 pp.; 112 figs.; $5; (book).

Gumlich, Dr. E.—*Magnetic Properties of Iron-Carbon and Iron-Silicon Alloys.*—Transactions of the Faraday Society, Oct., 1912; 22 pp*; 75c.

Hamilton, J. W. H.—*Developments in the Preparation of Iron Ores.* (Paper read before Am. Ir. & Steel Inst.; abstract).—Ir. Tr. Rev., Nov.28,1912; p. 1013; 7500 w; 25c.

Handy, J. O.—*Electrolytic Deposition of Copper from Sulphide Ores;* [Read to Internatnl. Congr. of Appl. Chem'y; abstract].—Met. & Chemi. Engg., Sept.12,1912; p. 604; 200 w; 35c. Also in E. & M. J., Sept. 14, p. 487; 500 w; 25c.

Hasegawa, T.—*Electrolytic Copper Refining at the Nikko Copper Works.*—M. & S. P., Oct.12, p. 465; 600 w*; 20c.

Holder, Chas. A.—*Electrolytic Extraction of Copper Ore in Norway.* (U. S. Consular report; abstract).—Mg. & Eng. World, Dec. 14,1912; p. 1088; 260 w; 10c.

Holland, A.—*Heavy Electrolytic Nickel Deposition;* [from Soc. d'Encouragem. Ind. Nat., Bull.; July,1912; brief abstract].—E. & M. J., Nov.2, p. 835; 500 w; 25c.

Job, P.—*Réduction électrolytique de l'acide phosphorique et de l'acide arsénique;* [Electrolytic reduction of phosphoric and

arsenic acid].—Laval, 1912; 11 pp; (pamphlet).

Johnson, J. E., Jr.—*Effect of Carbon on Quality of Charcoal Iron.* (Paper read before Am. Inst. Mg. Eng.; abstract).—Ir. Tr. Rev., Nov.21,1912; p. 964; 5000 w*; 25c.

Kershaw, John B. C.—*Electric Furnace Methods of Steel Production.*—Ir. Tr. Rev., Nov. 21and28,1912; 9000 w*; 50c.

König, H.—*Automatisch arbeitende Rohrverzinkungsanlagen;* [Some automatically operating zinc electroplating plants for iron pipes and tubes].—Helios, Vol.18-1912; pp. 869-872; 961-965*; $1. Abstract in Zts. f. Elektrochemie, Junel, p. 438; 3000 w*; 45c.

Lacey, Wm. N.—*Electrolytic Refining of Silver-Bismuth Alloys;* [Read to Amer. Electro-Cheml. Soc.; abstract].—Met. & Cheml. Engg., Nov.,1912; p. 747; 700 w; 35c.

Laist, Frederick.—*Chemistry of the Anaconda Reduction Processes.* (Paper read before Int. Cong. Appl. Chem.; abstract).—E. & M. J., Nov.30,1912; p. 1036; 1500 w; 25c.

Lebedew, P. P.—*Ueber die Schwefelbleielektrode und über die Passivität des Bleies;* [The lead sulphide electrode and passivity of lead].—Zts. f. Elektrochemie, Oct.15, 1912; p. 891; 3200 w*; 45c.

Lee, G. P.—*Electrodeposition of Metals and Alloys;* [Marino process; from Inst. of Marine Engrs., Trans.; abstract].—Iron & Coal Trades Rev., Nov.8, p. 757; 3000 w*; 35c.

Lidoff, A. P.—*Iron-Coke Electrodes;* [read to Internatnl. Congr. of Appl. Chem'y; abstract].—Met. & Cheml. Engg., Sept., Suppl.; 1912; p. 593; 100 w; 35c.

Mylius and Hüttner.—*Herstellung von reines Nickel;* [Production of pure nickel; beginning of tests at the Vienna physical-technical testing station]. — Physikal.-Techn. Reichsanstalt, Vienna; Tätigkeitsber. f. March,1912; pp. —; $2.

Neumann, —. *Metallurgy in* 1911 [in German].—See Tin.

Neumann, B.—*Metallurgy of Copper in* 1911; [in German].—See Copper.

Palmaer, W.—*Method of Producing Bicalcic Phosphate with the Help of Electrolytically Produced Acid and Alkali;* [Read to Internatnl. Congr. of Appl. Chem'y].—Met. & Cheml. Engg., Sept., Suppl., 1912; p. 581; 2500 w; 35c.

Paul, F. W.—*Manufacture of Open-Hearth Steel with Reference to Improvement in Yield.* (Paper read before Ir. & St. Inst., Leeds).—Eng. (London), Nov.29, 1912; p. 760; 3000 w; 35c.

Pitaval, R.—*Die elektrochemische Industrie Frankreichs;* [The electrochemical industries of France; German edition].—Halle, 1912; $3.50; (book).

Pring, J. N., and J. R. Curzon.—*Influence of Physical Condition of Metals on Cathodic Overvoltage.*—Faraday Soc., Trans.; June. 1912; pp. 237-246; $2.65.

Pulsifer, H. B.—*The Metallurgy of Lead; Refining.*—Salt Lake Mng. Rev., Oct.30, p. 18; 2800 w*; 25c.

Race, Jos.—*The Production of Chlorine for Water and Sewage Sterilization.*—Canadian Engr., Aug.1,1912; p. 255; 2500 w*; 25c.

Regelsberger, Fr.—*Elektrometallurgie;* [Review of electrometallurgic processes].—Leipzig, 1912; 140 pp; 16 figs; 75c (book).

Reichinstein, D.—*Quantitätive Untersuchungen über den Einfluss des Säuregehaltes des Elektrolyten auf die chemische Polarisation der umkehrbaren Elektrode Cu/Cu''*; [Tests on the influence of acidity of the electrolyte on the chemical polarization of the reversible electrodes Cu/Cu''].—Zts. f. Elektrochemie, Oct.1, p. 850; 8000 w*; 45c.

Sackur, O.—*Schmelzflusselektrolyse;* [Review of developments in 1909, 1910 and 1911 on electrolysis, using molten electrolytes; rubidium, calcium, magnesium, aluminum, cerium, sodium, base metals].—Zts. f. Elektrochemie, Aug.15,1912; p. 731; 4000 w; 45c.

Schall, C. and K. Andrich.—*Ueber elektrolytische Persulfatdarstellung;* [Electrolytic production of persulphates].—Chemiker Ztg., Junes.1912; p. 645; 750 w; 35c.

Stadler, H.—*The New Metallurgy* [on the Rand]. (Jnl. Chem., Met. & Mg. Soc., S. A.; abstract).—W. A. Mg., Bldg. & Eng. Jnl., Oct.5,1912; p. 12; 5000 w; 35c.

Stockmeier, Dr.—*Fortschritte der chemischen Metallbearbeitung und verwandter Zweige im Jahre* 1911; [Review of progress in the chemical working of metals and allied branches in 1911; 1: Galvanizing and electroplating].—Chemiker Ztg., Oct.8, p. 1165; 2000 w; 35c.

Strahl, G.—*Das Färben von Metallen;* [The coloration of metals].—*Galvanoplastik*, April,1912; p. 26; 1100 w; 35c.

Urquhart, Charles H.—*The Black Oak Mill, Calif.*—M. & S. P., Nov.30,1912; p. 687; 3000 w*; 20c.

Thompson, M. de K.—*Simultaneous Electrolytic Deposition of Copper and Zinc from Various Solutions Not Containing Cyanide;* [in brass plating].—Met. & Cheml. Engg., Aug.,1912; p. 458; 3800 w; 35c.

Trurnit, E.—*Die Spannung und Stromstärke in galvanischen Bädern;* [Tension and amperage in electrolytic baths].—Galvanoplastik, April,1912; p. 23; 3000 w; 35c.

Valeton, J. J. P.—*Ueber der Grundbegriffe der Phasenlehre und ihre Anwedung auf wasserhaltige Salze;* [Principles of the phase rule, and their bearing on hydrous salts; lecture before Leipzig Inst. f. Mineralogie & Petrogr.].—Kali, Junel,1912; p. 258; 3000 w; 45c.

Walker, W. H.; R. E. Genenheimer; E. Wilderman, and others.—*Symposium on Electrolytic Production of Caustic and Bleach;* [Internatnl. Congr. of Appl. Chem'y; abstract].—Met. & Cheml. Engg., Sept.12,1912; p. 627; 2700 w*; 35c.

Walker, Wm. H., and Patrick, Walter A. —*The Determination of Oxygen in Iron and Steel by Reduction in an Electric Vacuum Furnace.* (Paper read before Int. Cong. Appl. Chem.).—Jnl. Ind. & Eng. Chem., Nov.,1912; p. 799; 2800 w*; 75c.

Wäser, B. and E. H. Schulz.—*Die photographische und microphotographische* Wiedergabe elektrolytischer Metallniederschläge; [Results from the photographic and microphotographic examination of metallic electrolytic precipitates].—Elektrochem. Zts., May,1912; p. 36; 500 w*; 35c.

Weiss, Pierre.—*Researches on Magnetization at Very Low Temperatures.*—Tr. Faraday Soc., Oct.,1912; 3 pp*; 75c.

Weiss, Pierre.—*The Magnetic Properties of the Alloys of the Ferromagnetic Metals.* —Trans. of the Faraday Soc., Oct.,1912; 8 pp; 75c.

Wilderman, M.—*Recent Progress in the Electrolysis of Alkaline Salts.*—8th Inter-

natnl. Congr. of Appl. Chem'y, 1912; Vol. 21, pp. 185-196.

Williams, A. D.—*Gas Engines at the Central Plant.* (Describes the plant of the Am. Steel & Wire Co. at Cleveland).—Power, Dec.3,1912; p. 825; 2000 w*; 20c.

Amer. Electrocheml. Soc.—*Symposium on Conduction.*—A. E. Soc., Trans., Vol. 21; 1912; pp. 19-578.

M. S. I.—*Affinage électrolytique d'anodes d'or brut;* [Electrolytic refining of gold bullion anode bars; Wohlwill process in warm hydrochloric acid].—Jnl. du Four Electriq., July1,1912; p. 295; 1000 w; 35c.

———. *Calcination de la Blenda;* [Calcination of blende].—Revista Minera, Nov. 16,1912, p. 534; 2300 w; 35 cts.

———. *Dépots électrolytiques défectueux de nickel;* [Defective electrolytic deposition of nickel].—Rev. d. Electrochemie, July, 1912; p. 199; 600 w; 45c.

———. *Herstellung von Nickelniederschlägen auf graphitierten Wachsflächen;* [Production of nickel precipitate on graphitized wax surfaces].—Galvanoplastik, May, 1912; p. 53; 500 w*; 35c.

———. *The Marino Process for Electro-Zincing;* [on glass and earthenware, etc.].—Engg. Rev., June,1912; p. 505; 2000 w; 35c.

———. *Usine d'affinage du cuivre de la Soc. Métallurgique de Livourne;* [The Livourne electrolytic refinery].—Rev. d'Electrochimie, June,1912; p. 179; 1000 w; 35c.

———. *Wet Methods of Copper Extraction;* [Review of possibilities].—M. & S. P., Sept.21,1912; p. 360; 1200 w; 20c.

Electric Smelting and Furnaces

For electric smelting of iron see under "Iron and Steels."

Bancroft, W. D., L. V. Walker and C. F. Miller.—*Study of a Small Carborundum Furnace.*—8th Internatnl. Congr. of Appl. Chem'y, Vol. 21, pp. 19-33.

Bensel, F.—*Versuche zur Verminderung der Metallverluste beim Messingschmelzen;* [Experiments toward diminishing metal losses in smelting brass; electric smelting].—Metallurgie, Aug.22,1912; p. 523-531*; 45c.

Bergius, F. R.—*Artificial Production of Coal;* [Read to Internatnl. Congr. of Appl. Chem'y; from cellulose in electric furnace at high pressure; abstract].—Met. & Cheml. Engg., Sept.12,1912; p. 648; 150 w; 35c.

Bernthsen, H. A.—*Synthetic Ammonia; The Haber Process of the Badische Co.;* [Read to Internatnl. Congr. of Appl. Chem'y; abstract].—Met. & Cheml. Engg., Sept.,1912; p. 637; 5000 w; 35c.

Bodenstein, M. and F. Kranendieck.—*Ein Thermoregulator für elektrische Widerstandsöfen;* [Thermoregulators for laboratory resistance-ovens].—Zts. f. Elektrochemie, June1,1912; p. 417; 1000 w*; 45c.

Borchers.—*Metallurgic Progress, Aachen,* 1902-1912; [in German].—See Aluminum.

Bornemann, K. and G. von Rauschenplat.—*Die elektrische Leitfähigkeit der Metallegierungen im flüssigen Zustande;* [Electrical conductivity of molten alloys; antimony-copper and copper-nickel].—Metallurgie, Aug.8,1912; p. 473-486; Aug.22, pp. —; 95c.

Busachi, A.—*Sul' Contributo alla elettrometallurgia dello zinco';* [Critical notes on Gallo's paper on the electrometallurgy of zinc].—Rassegna Mineraria, Sept.21, 1912; p. 153; 1500 w; 35c.

Calhane, D. F. and E. E. Bard.—*An Efficient Electric Furnace for High Temperatures.*—Met. & Cheml. Engg., Aug.,1912; p. 461; 1800 w*; 35c.

Cowles, A. H.—*Alumina, Hydrochloric Acid, Alkalis, and White Hydraulic Cement from Clay, Salt and Lime;* [Read to Internatnl. Congr. of Appl. Chem'y; abstract].—E. & M. J., Sept.21,1912; p. 535; p. 529; 3500 w*; 25c.

Eyde, Sam—*Oxidation of Atmospheric Nitrogen and the Development of the Resulting Industries of Norway;* [Read to Internatnl. Congr. of Appl. Chem'y; abstract].—Met. & Cheml. Engg., Sept.12, 1912; p. 617; 2100 w; 35c.

Fichter, Fr. and G. Oesterheld.—*Ein Induktionsofenmodell;* [Model of an induction furnace].—Zts. f. Elektrochemie, June 1,1912; p. 429; 400 w*; 45c.

Fink, C. G.—*Smelting Cobalt-Silver Ores by Vacuum Electric Furnace;* [Read to Amer. Electrocheml. Soc.; abstract].—Mining & Engg. World, Oct.5,1912; p. 627; 600 w; 10c.

FitzGerald, F. A. J.—*The Electric Furnace;* [Discusses modern phases of development].—Amer. Inst. Electr. Engrs., Proc.; June,1912; pp. 875-884; $1.15.
Abstract in Canadian Engr., July11,1912; p. 143; 3600 w; 25c.

FitzGerald, F. A. J.— *Crystolon; Silicon Carbide;* [Manufacture at Niagara].—Met. & Cheml. Engg., Sept.,1912; p. 519; 2000 w*; 35c.

FitzGerald, F. A. J.—*Heat Losses in Electric Furnaces;* [Read to Internatnl. Congr. of Appl. Chem'y; abstract].—Met. & Cheml. Engg., Sept.12,1912; p. 599; 1000 w; 35c.

Gallo, G.—*Sul contributo all' elettrometallurgia dello zinco;* [Notes on Busachi's paper on electrometallurgy of zinc].—Rassegna Mineraria, Oct.21, p. 218; 600 w; 35c.

Gallo, Gino.—*Contributo alla elettrometallurgia dello zinco;* [The electrometallurgy of zinc].—Rassegna Mineraria, Aug.1,1912; p. 57; Aug.11, p. —; 9000 w; 75c.

Ganet, L.—*De l'électrométallurgie du zinc;* [Electric smelting of zinc].—Jnl. du Four Electriq., Aug.1,1912; p. 337; 1500 w; 35c. Also in Echo d. Mines, Aug.8, p. 891; 1500 w*; 35c.

Hahn, O.—*Electric Smelting of Arsenical Copper Ore;* [Abstract and transl. from Metallurgie, Vol. 8, No. 19].—E. & M. J., Sept.14,1912; p. 504; 500 w; 25c.

Hansen, C. A.—*Electric Smelting of Copper and Brass.*—Amer. Inst. of Metals, Paper No. 11, Sept.,1912; 20 pp.*; 50c.

Hardtung, H.—*Beiträge zur Kenntnis der Metallnitride;* [Notes on the metal nitrides].—Erlangen dissertation, 1912; 66 pp.*; $1.50.

Hering, C.—*Simplification of Electrothermal Calculations; the Watt and the Thermal Ohm.*—Amer. Inst. Electr. Engrs., Proc.; June,1912; pp. 885-896; $1.15.

Ingalls, W. R.—*The Electric Smelting of Zinc Ore;* [Read to Canadian Mng. Inst., March,1912.]—Canadian Mng. Inst., Trans; Vol. 15; Pt. 1; 1912; pp. 3-16; $1.15.
Abstract in E. & M. J., July6,1912; p. 7; 5000 w; 25c. Also in Mining & Engg. World, July13, p. 58; 5000 w; 10c. Also in Mng. Sci., Aug.1, p. 71; Aug.8, p. 88; 5000

w; 25c. Also in Met. & Cheml. Engg., Aug., p. 481; 4800 w; 35c.

Johnson, W. Mc. A.—*Notes on Electric Zinc Smelting.*—Met. & Cheml. Engg., Sept., 1912; p. 537; 1000 w*; 35c.

Johnson, W. McA.—*2-Stage Electric Smelting of Iron Ore;* [Johnson zinc furnace applied to iron].—Iron Age, Aug.29, 1912; p. 450; 1000 w*; 30c.

Kroczek, A.—*Building des atmosphärischen Stickstoffes in Natur und Technik;* [Production of atmospheric nitrogen in nature and artificially].—Zentralbl. f. Kunstdünger Ind., Oct.7, p. 341; Oct.21, p. —; 3000 w; 50c.

Knutsen, J. B. M.—*Industrial Furnaces;* [Read to Soc. of Cheml. Ind'y of Victoria].—Australian Mng. Standd., May30,1912; p. 505; June13, p. 553; 4000 w*; 50c.

Laboureur and Lefort. — *Fours Electriques; Construction; Applications;* [Electrofurnaces, their construction and uses].—Paris, 1912; 152 pp*; (book).

Lebrun, J. M. and R. Nicaise.—*La réproduction artificielle du diamant;* [Artificial reproduction of the diamond].—Chimiste, April,1912; p. 61; 5000 w; 75c. Abstract in Rev. d'Electrochimie, June, p. 168; July, p. —; 3000 w; 75c.

Lefranc, L.—*Atmospheric Nitrogen.*—Amer. Fertilizer, Sept.7,1912; p. 44; 1500 w; 25c.

Louvrier, F.—*Causes of the Practical Non-Success of Electric Furnaces in Treating Zinc Ores.*—Met. & Cheml. Engg., Nov., 1912; p. 747; 2000 w; 35c.

Maillet, G. A.—*Electrométallurgie du Zinc;* [Côte-Pierron electric zinc smelting furnace at Arudy, France].—Jnl. du Four Electriq., Sept.15,1912; p, 385; 1000 w*; 35c.

Mennicke, H.—*Fortschritte in der Metallurgie des Zinns während* 1910-11; [Progress in the tin industry in 1910-11; ore occurrences, markets, milling, metallurgy].—Elektrochem. Zts., May,1912; p. 31; June, p. —; 4000 w; 50c.

Neumann, —. *Metallurgy in* 1911 [in German].—See Tin. j

Norton, T. M.—*Utilization of Atmospheric Nitrogen.*—U. S. Bur. of Manufactures, Publication; 1912; 178 pp*; 50c.

Pitaval, R.—*Die elektrochemische Industrie Frankreichs;* [The electrochemical industries of France; German edition].—Halle, 1912; $3.50; (book).

Plötze, H. — *Oxydationsreaktionen im elektrischen Druckofen mit den Oxyden des Strontiums und Bleies und den Hydroxen der Alkalien;* [Oxidationreactions in the electric pressure furnace with strontium and lead oxides and the alkaline hydroxides].—Berlin dissert.; 1912; 67 pp.; $1 (Thesis).

Ramsay, Sir Wm.—*The Manufacture of Nitrates from the Atmosphere;* [Discussion Schönherr, Guye, etc., patents].—Roy. Soc. of Arts, Jnl., June14,1912; p. 756; 2000 w; 35c.

Richards, J. W.—*The Electrochemical Industries of Norway;* [Iron and steels, ferros, zinc, nickel, carbide, aluminum, sodium, nitrogen; read to Amer. Electrochem. Soc.; abstract].—Electrician, Aug. 16,1912; p. 772; 3200 w; 35c.

Rollandet, G. J. — *The Smelting of Silicon;* [Tone electrofurnace process].—Mng. Sci., Aug.15,1912; p. 105; 750 w*; 20c.

Sackur, O.—*Schmelzflusselektrolyse;* [Review of developments in 1909, 1910 and 1911 on electrolysis, using molten electrolytes; ribidium, calcium, magnesium, aluminum, cerium, sodium, base metals].—Zts. f. Elektrochemie, Aug.15,1912; p. 731; 4000 w; 45c.

Scott-Hansen, A.—*Hydro-electric Plants and Their Application to Electrochemical Industries;* [Norway].—Faraday Soc.,Trans., Vol. 7, Pts. 1-2; 1911; pp. 78-94; $4.

Stephan, —. *Einiges über die Erzeugung von Metallen im elektrischen Ofen;* [Electric furnaces, with special reference to Stephan's work on reduction of Belgian Congo copper ores in the Girod furnace; read to Ges. Deu. Metallhütten & Bergleute; abstract].—Deu. Bergwerks Ztg., Oct.1,1912; p. 1; 750 w; 35c.

Thwing, C. B.—*Temperature Control of Small Electric Furnaces;* [Read to Internatnl. Congr. of Appl. Chem'y; brief abstract].—Met. & Cheml. Engg., Sept.,1912; p. 586; 500 w*; 35c.

Tucker, S. A., and H. L. Read.—*Fixation of Nitrogen by Alumina and Carbon;* [read to Amer. Electrocheml. Soc.].—Met. & Cheml. Engg., Nov.,1912; p. 745; 1000 w; 35c.

Fischer, F., and H. Ploetze.—*Untersuchungen im elektrischen Druckofen;* 1: *Konstruktion, und Temperaturgefälle unter Druck;* 2: *Strontiumperoxyd aus Strontiumoxyd und Sauerstoff;* 3: *Bleidioxyd aus Bleioxyd und über die schwarzbraune Verbindung Pb_5O_8;* 4: *Alkaliperoxyde direkt aus Alkalihydroxyden und Sauerstoff;* [Researches with the electric pressure furnace; 1: Construction, and temperature drops with pressure; 2: Strontium peroxide from the oxide and oxygen; 3: Lead dioxide from lead oxide; and the dark brown compound Pb_5O_8; 4: Potash and alkaline peroxides direct from hydroxides and oxygen.—Zts. f. anorgan. Chemie, Vol. 75, No. 1; 1912; pp. 1-40*; $1.20.

Wile, R. S.—*An Electric Furnace for Treatment of Tin Dross, Concentrates from Cyanide Mills and Other Metallurgical Work.*—Met. & Cheml. Engg., Aug.,1912; p. 495; 1000 w*; 35c.

Winne, R. and C. Dantsizen.—*Small Electric Furnace with Heating Element of Ductile Tungsten or Ductile Molybdenum;* [Read to Amer. Electrocheml. Soc., abstract].—Electrician, Sept.27,1912; p. 1027; 1000 w*; 35c.

Amer. Electrocheml. Soc.—*Symposium on Conduction.*—A. E. Soc., Trans., Vol. 21; 1912; pp. 19-578.

J.—*Les industries électrochimiques et électrométallurgiques en Italy;* [Electrochemical and electrometallurgical industries in Italy; carbide, cyanamide, aluminum, ferros, pig-iron, electrosteel, nitric acid, electrodes, oxygen].—Jnl. du Four Electriq., Oct.15, p. 433; 1800 w; 35c.

———. *Classification of Electric Furnaces.*—Met. & Cheml. Engg., July,1912; p. 385; 1000 w; 35c.

———. *Condensation Problems in Electric Zinc Smelting.*—Met. & Cheml. Engg., Aug.,1912; p. 451; 1000 w; 35c.

———. *Elektrische Schmelzöfen;* [Electric smelting ovens].—Centralbl. d. Hütten & Walzwerke, June15,1912; p. 310; June25, p. 331; 6000 w*; 50c.

———. *Laboratory Electric Transformer Crucible Furnace;* [A. E. G. type].—Met. & Cheml. Engg., Aug.,1912; p. 501; 300 w*; 35c.

———. *Le zinc électrique;* [Electro-furnace zinc; status in France and Italy].—Jnl. du Four Electriq., Sept.1,1912; p. 367; 1000 w; 35c.

———. *The FitzGerald and Bennie Laboratories in Niagara Falls.*—Met. & Cheml. Engg., Sept.,1912; p. 535; 2000 w*; 35c.

THERMIC METALLURGY

For electric furnaces see under "Electro-metallurgy." For metallurgy of iron and steels, see under "Iron and Steels."

Austin, W. L.—*Leaching Applied to Copper Ore; 22: Roasting Preparatory to Lixiviation.*—Mines & Methods, Sept.,1912; p. 9; 3600 w; 25c.

Austin, W. L.—*Leaching Applied to Copper Ore; 23: Sulphatizing of Cupriferous Material by Roasting.*—Mines & Methods, Oct.,1912; p. 29; 2500 w; 25c.

Bain, H. F.—*The Besshi Mine and Shisaka Smelter.*—M. & S. P., Sept.21,1912; p. 363; 2500 w*; 20c.

Bain, H. F.—*Improvements at Ashio Mines and Mills.*—M. & S. P., Aug.24,1912; p. 239; 2000 w*; 20c.

Bain, W. L.—*Roasting and Cyanidation;* [Motter automatic roasting furnace and process].—Mex. Mng. Jnl., Nov., p. 30; 1200 w*; 25c.

Barbour, P. E.—*Conker Plate Details;* [in bridge walls of reverberatories at Garfield, Utah].—E. & M. J., Sept.21,1912; p. 541; 700 w*; 25c.

Bell, H. Poynter.—*The Utilization of Peat Fuel.*—Can. Eng., Nov.21,1912; p. 765; 750 w; 20c.

Bennetts, B. H.—*Smelting Plants for Individual Mines.*—Pacific Mng. Jnl., Nov., 1912; p. 82; 1400 w*; 30c.

Borchers.—*Metallurgic Progress, Aachen,* 1902-1912; [in German].—See Aluminum.

Breger, C. L.—*The "American" Zinc Smelter at Hillsboro, Illinois.*—Mining & Engg. World, Nov.9, p. 847; 5000 w*; 10c.

Browne, D. H.—*The Iron Ratio for Copper-Converter Cost Comparisons.*—E. & M. J., Nov.2, p. 842; 600 w; 25c.

Canby, R. C.—*Development of the American Water-Jacket Lead Blast-Furnace;* [Read to Internatnl. Congr. of Appl. Chem'y; abstract].—Met. & Cheml. Engg., Sept.12,1912; p. 596; 1000 w; 35c.

Carlyle, E. J.—*Copper Smelting at Kyshtim;* [Pyritic smelting in the Urals].—E. & M. J., June22,1912; p. 1231; 4000 w*; 25c.

Chase, Thorington.—*The World's Greatest Smelter.* (Description of the Washoe plant, Montana).—Mex. Mg. Jnl., Dec., 1912; p. 30; 6000 w; 25c.

Clerc, F. L.—*The Chemical and Physical Reactions in a Zinc Retort.*—Met. & Cheml. Engg., July,1912; p. 399; 3000 w; 35c.

Clerc, F. L.—*A Zinc Retort with a Copper Bottom.*—Met. & Cheml. Engg., Aug., 1912; p. 463; 4500 w*; 35c.

Cowles, R. K.—*Precipitation of Gold and Silver by Carbon.* (Proc. Aust. Inst. M. E.).—M. & S. P., Dec.7,1912; p. 730; 1800 w*; 20c.

Crookes, Sir Wm.—*The Volatility of the Platinum Group of Metals;* [Read to Roy. Soc.; brief abstract].—Mining & Engg. World, Aug.10,1912; p. 262; 500 w; 10c.

Darrow, W. E.—*Refining Zinc Box Precipitate.*—E. & M. J., Oct. 26, p. 785; 800 w; 25c.

Dean, W. R.—*Foundry Tests and Foundry Practice;* [Brass; read to Amer. Inst. of Metals].—Cheml. Engr., Oct., p. 147; 2000 w; 35c.

Dwight, A. S.—*The Dwight-Lloyd Process of Roasting and Sintering;* [Read to Internatnl. Congr. of Appl. Chem'y; abstract].—Met. & Cheml. Engg., Sept.12, 1912; p. 595; 1500 w; 35c. Also abstracted in E. & M. J., Sept.14, p. 486; 600 w; 25c.

Edmands, H. R.—*Smelting and Refining Zinc Box Precipitate.*—M. & S. P., July13, 1912; p. 55; 1200 w; 20c.

Emrich, H. H.—*The Refining of Blister Copper;* [Fire refining and electrolytic].—Amer. Inst. Mng. Engrs., Bull. 66; June, 1912; pp. 611-632; $1.15.

Eurich, E. F.—*Development of the Parkes Process for Desilvering Lead in the U. S.;* [Read to Internatnl. Congr. of Appl. Chem'y; abstract].—Met. & Cheml. Engg., Sept.12,1912; p. 597; 750 w; 35c.

Fawns, S.—*Tin.*—See under Tin.

Filitz, Fr.—*Praktischer Leitfaden für Zinkhütten-Laboratorien;* [Practical guide for zinc smelter laboratories].—Kattowitz, 1911; pp. —; 5 figs.; $3.50; (book).

Fink, Edward.—*Fink Smelting Furnace for Copper, Lead and Zinc;* [Direct bessemerization of sulphide, zinckiferous ores].—Mining & Engg. World, Nov.2, p. 797; 3800 w*; 10c.

Friedrich, K.—*Thermische Daten zu den Röstprozessen;* [Decomposition temperatures and thermic reactions in the roasting of the carbonates; cerussite, zinc, iron, manganese, limestone, strontianite, dolomite, magnesite].—Metallurgie, July8,1912; p. 409-418*; 50c.

Friese, Fr.—*Neuere Versuche aus dem Gebiete der Aufbereitung goldhaltiger Erze, vornehmliche Pyrite;* [Researches in the metallurgy of auriferous, especially pyritic, ores; roasting; cyaniding].—Oestr. Zts. f. Berg- & H-wesen, Apr.27,1912, p. 227; May4, p. 241; May11, p. 260; May18, p. 270; 9000 w*; $1.50.

Goodale, S. L. and H. C. Ray.—*The Pennsylvania Smelting Co. Plant;* [Carnegie, Pa.; chiefly for high-grade silver-lead].—M. & S. P., July27,1912; p. 104; 2200 w*; 20c.

Goosman, J. B.—*Refining Cyanide Precipitate at Waihi, N. Z.;* [From Australian Mng. Standd.].—Mex. Mng. Jnl., Sept., 1912; p. 26; 600 w; 25c.

Greenawalt, Wm. E.—*The Hydrometallurgy of Copper; I: Roasting; II: Hydrometallurgical Process.*—N. Y. and London; 1912; 504 pp.; 112 figs.; $5; (book).

Greenwood, H. C.—*The Boiling Points of Metals.*—Faraday Soc., Trans.; Vol. 7, Pts. 1-2; 1911; pp. 145-158*; $4.

Hammond, E. K.—*Scientific Management of a Foundry Cupola.*—Foundry, Oct.,1912; 7 pp.*; 20c.

Hart-Davis, Hugh Vaughan.—*Emploi du Poussier de Charbon comme Combustible;* [The use of coal dust as fuel] (Abstract of communication to the Manchester Geological and Mining Society).—L'Echo de Mines, p. 1274; 900 w; 35c.

Hawley, F. G.—*Determining SO_3 in Flue Gas.*—E. & M. J., Nov.23,1912; p. 987; 2000 w; 25c.

Hempel, W., and C. Schubert.—*Ueber die Dissoziation einiger Oxyde, Carbonate und Sulfide;* [Dissociation of some mineral oxides, carbonates and sulphides; abstract of Schubert's thesis in Dresden Techn. Hochschule, 1912].—Zts. f. Elektrochemie, Aug. 15,1912; p. 729; 200 w; table; 45c.

Heeyr, W.—*Das Rösten von Eisenerzen;* [The roasting of iron ores].—Techn. Blätter, Aug. 31, 1912; p. 274; 2000 w*; 35c.

Hermanns, H.—*Ueber Martinofenkopfe;* [Design of furnace tops in various types of Martin furnace].—Giesserei Ztg., Oct.15, p. 632; Nov.1, p. —; 3000 w*; 50c.

Hess, F. L.—*The Production of Antimony, Arsenic, Bismuth and Selenium in* 1911.—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 6 pp; 20c.

Hixon, Hiram W.—*Smelting Cyanide Precipitate.*—E. & M. J., Nov.30,1912; p. 1027; 1000 w*; 25c.

Hofman, H. O. and W. Wanjukow.—*The Decomposition of Metallic Sulphates at Elevated Temperatures in a Current of Dry Air;* [Tests on ferrous, bismuth, aluminum, lead, cupric, manganous, zinc, nickel, cobalt, cadmium, magnesium, silver, calcium, and barium sulphates].—Amer. Inst. Mng. Engrs., Bull. No. 69; Sept.,1912; pp. 889-945*; $1.15.

Hommel, W.—*Die Prinzipien der Blenderöstung in Muffelöfen;* [Principles of blende roasting in muffel furnaces].—Metallurgie, May8,1912; p. 281; 12,000 w*; 50c.
French abstract in Rev. de Métallurgie, Sept.,1912; pp. 699-720*; $1.15.
English abstract in E. & M. J., Oct.12, p. 697; Oct.19, p. —; 10,000 w; 40c.

Hough, Geo. J.—*The Salida Smelter* [of Ohio & Colo. Smeltg. & Refg. Co., at Salida, Colo.; chiefly lead].—M. & S. P., June29, 1912; p. 895; 800 w*; 20c.

Howard, L. O.—*The International Lead Smeltery, Tooele, Utah.*—Salt Lake Mng. Rev., Nov.15, p. 11; Nov.30, p. —; 4500 w*; 40c.

Humperdinck, C.—*Arbeitsweise in amerikanischen Giessereien;* [Operating conditions in American foundries; read to Ver. Deu. Giessereifachleute, May.1912].—Giesserei Ztg., June15,1912; p. 379; 3200 w; 35c.

Jean, E.—*Cuisson de Chaux Pures;* [Burning of pure limes] (last part).—Revue des Matériaux de Construction et de Travaux Public, Nov.,1912; p. 136; 1300 w*; 75c.

Juretzka, Franz.—*Verhüttung von Zinkerzen;* [The smelting of zinc ores].—Centralblatt der Hütten u. Walzwerke, Nov.15, 1912; p. 602; 3000 w; 25c.

Juretzka, F.—*Die Anlage von Zinkhütte;* [The laying-out of zinc smelting plants].—Centralbl. d. Hütten & Walzwerke, Sept.25, 1912; p. 502; Oct.5, p. —; 5000 w*; 50c.

Juschkewitsch, N.—*Zur Theorie des Kupfersteinschmelzprozesses:* [Theory of smelting copper matte].—Metallurgie, Sept.8, 1912; pp. 543-558; 10,000 w*; 45c.

Kershaw, John B. C.—*Electric Furnace Methods of Steel Production* (fifth article).—Ir. Tr. Rev., Dec.5,1912; p. 1067; 4000 w*; 25c.

Kothuy, —. *Recherches sur la marche du procédé de grillage chlorurant des cendres de pyrite;* [Succession of the reactions in chloride roasting of pyritic cinders; from Metallurgie, 1911, No. 13, pp. 389-399; French abstract].—Rev. de Métal'gie, June,1912; p. 311; 1200 w*; $1.15.

Krantz, Fr.—*Die Entwicklung der Oberschlesischen Zinkindustrie;* [Metallurgy of zinc in Upper Silesia: history, mining, treatment, smelting, and industrial].—Kattowitz, 1912; 96 pp*; $2.50 (book).
Abstracts, in French (by Desmarets), on smelting, in Rev. de Métallurgie, Aug., 1912; pp. 577-600*; $1.15.

Kriegwr, A. O.—*The Use of Oil as Fuel.*—Eng. News, Nov.21,1912; p. 978; 2000 w; 25c.

Kroupa, —. *Ueber einige Fortschritte der Röstung von Bleierzen;* [Some advances in the roasting of lead ores].—Oestr. Zts. f. Berg & Hüttenw., Sept.14, Sept.21; 5 pp.*; 65c.

Laist, F.—*Chemistry of the Reduction Processes in Use at Anaconda, Mont;* [Read to Internatnl. Congr. of Appl. Chem'y; abstract].—Met. & Chemi. Engg., Sept. Suppl., 1912; p. 592; 500 w; 35c.

Levy, D. M.—*Modern Copper Smelting.*—London, 1912; pp. —; $3 (book).

Liddell, D. M.—*Muffel Annealing Furnace for Copper Wire.*—E. & M. J., Nov.2, p. 834; 500 w*; 25c.

Lindner, G.—*Wanddruck in Silos und Schachtöfen;* [Wall pressure in storage bins and shaft furnaces].—Berlin, 1912; 32 pp; 42 figs; $1 (book).

Mathewson, E. P.—*Development of the Reverberatory Furnace for Smelting Copper Ores;* [Anaconda plant, Mont.; Steptoe works, Nev.; read to Internatnl. Congr. of Appl. Chem'y; abstract].—Met. & Chemi. Engg., Sept. Suppl.; 1912; p. 591; 750 w; 35c.

May, W. J.—*The Real Use of Foundry Fluxes.*—Mechl. World, Aug.9,1912; p. 69; 1000 w; 35c.

McMurtry, G. C.—*Collection of Precious Metals as Speiss in the Smelting of Antimonial Concentrates;* [Recovery of gold from copper concentrates or matte].—Instn. of Mng. & Met'gy, Bull. 97; Oct.,1912; 8 pp.; 65c.

Nemes, A.—*Altes und Neues über Blenderöstung;* [Old and new processes in the roasting of zinc blende].—Metallurgie, Aug. 22,1912; p. 516; 1000 w*; 45c.

Mennicke, Dr. Hans.—*Fortschritte in der Metallurgie des Zinns während der Jahre* 1910-11; [Advances in the metallurgy of tin in 1910 and 1911].—Elektrochemische Zts., Oct.,1912; p. 184; 2500 w; 75c.

Neumann, B.—*Das Metallhüttenwesen im Jahre* 1911; [Review of metallurgy in 1911; 1: copper; 2: zinc, cadmium, tin, lead; 3: antimony, arsenic, bismuth, nickel, cobalt, platinum, mercury, silver, gold, aluminum].—Glückauf, Sept.21,1912; pp. 1529-1536; (2), Sept.28, pp. 1569-1579; (3), Oct.5, pp. 1613-1623; 95c.

Meuthen, A.—*Kalorimetrische Untersuchung des Systems Eisen-Kohlenstoff;* [Calorimetric investigation of the iron-carbon system].—Ferrum, Oct.8,1912; p. 1; 9000 w*; 75c.

Meyer, Ferd. M.—*Neues Substanz zur Erhöhung der Festigkeit von Portlandzement;* [A new substance for increasing the strength of Portland cement].—Tonindustrie-Ztg., Nov.30,1912; p. 1883; 1500 w; 35c.

Parry, L.—*Systematic Treatment of Metalliferous Wastes;* [Lead, tin, antimony, copper, nickel and zinc].—London, 1912; 121 pp; $2 (book).

Pulsifer, H. B.—*The Metallurgy of Lead;* [Improving and operating the blast furnace].—Salt Lake Mng. Rev., Aug15,1912; p. 19; Aug.30, p. 16; Sept.15, p. 15; Sept. 30, p. 19; Oct.15, p. 19; 10,000 w*; 90c.

Read, T. T.—*The Mason Valley Copper Smelter.*—M. & S. P., Aug.31,1912; p. 267; 3200 w*; 20c.

Richards, J. W.—*Reduction of Zinc Oxide;* [Heat reactions at 1125° C.].—E. & M. J., June22,1912; p. 1214; 600 w; 25c.

Rose, T. K.—*The Annealing of Coinage Alloys;* [Read to Inst. of Metals; abstract of paper and discussion].—Engnrg., Sept. 27, 1912; p. 433; 2000 w; 30c.

Ruer, R., and K. Kaneko.—*Das System Nickel-Cobalt;* [The cobalt-nickel combinations in smelting].—Metallurgie, July8,1912; p. 419-422*; 50c.

Saunders, G. J.—*Metallurgical Treatment at Mt. Morgan, Queensland;* [Oxidized, mundic and copper-gold ores; roasting, smelting, acid plant, chlorination].—Sydney Univ. Engg. Soc., Jnl., Vol. 16 (for 1911-12); pp. 25-60*; $2.

Siebenthal, C. E.—*Lead in* 1911; *Smelter Production.*—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 41 pp.; 20c.

Siebenthal, C. E.—*Zinc and Cadmium in* 1911; *Smelter Production.*—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 54 pp.; 10c.

Spear, Elwood B., and Strahan, Samuel S.—*The Determination of Zinc by Electro-analysis.* (Paper read before Int. Cong. Appl. Chem.).—Jnl. Ind. & Eng. Chem., Dec.,1912; p. 889; 2000 w; 75c.

Stahl, W.—*Ueber Warzen, Pocken, Blasen oder Blättern auf gewalztem Kupfer,* [Warts, spots, blow-holes and scale on rolled copper].—Metallurgie, July8,1912; p. 418; 500 w; 50c.

Steelman, Joseph.—*Recent Developments in Heat Treatment of Steel.*—Mex. Mg. Jnl., Dec.,1912; p. 25; 3000 w; 25c.

Streeter, R. L.—*Power Machinery of the Steel Industry; Blast Furnaces;* [Blowers, skip-hoists and charging apparatus].—Engg. Mag., Sept.,1912; pp. 864-879*; 35c.

Styri, H.—*Basisches Verschmelzen von Kupferstein;* [Basic converting of copper matte].—Metallurgie, July8,1912; p. 426-431; July22, p. —; 7000 w; 75c.

Thomson, R. D.—*Casting Pure Copper by the Use of Boron Suboxide.*—Castings, July, 1912; p. 109; 1000 w*; 25c. Also in Engg. News, July18, p. 105; 600 w; 25c.

Van Brussell, J. B.—*Magnetic Dressing of Tin Ores.*—E. & M. J., Nov.23,1912; p. 988; 1500 w*; 25c.

Wagenmann, K.—*Das System Bleiglanz-Antimonglanz und die Laugerei antimon-haltiger Bleiglanze;* [Lead-antimony sulphides in pig-lead, and the leaching of antimony-bearing lead sulphides].—Metallurgie, Ang.22,1912; pp. 518-523*; Sept.8, pp. 537-543*; 95c.

Wagner, P. A.—*Mining and Ore Treatment at Tsumeb (Otavi) in German S. W. Africa;* [Copper-lead ores and smelting].—S. Afr. Mng. Jnl., Anniversary No., Sept., 1912; p. 323; 1700 w; $1.

Watts, Oliver P.—*The Making of Magnesia Crucibles.*—Wis. Eng., Nov.1912; p. 64; 1000 w; 30c.

Wedge, U.—*The Sulphatizing Roasting of Copper Ores and Concentrates;* [Read to Internatnl. Congr. of Appl. Chem'y; abstract].—Met. & Cheml. Engg., Sept.Suppl.; 1912; p. 593; 1000 w; 35c.

Weil, C. L.—*A Recent Evaporator Test;* [4-effect Faller system at Ludington Salt Works, Michigan].—Met. & Cheml. Engg., Sept.,1912; p. 565; 1000 w; 35c.

Weintraub, E.—*Progress of Work on Boronized Copper;* [Use of boron suboxide flux as de-oxidizer].—Amer. Inst. of Metals, Paper No. 14, Sept.,1912; 8 pp*; 1500 w; 50c.

West, J. G.—*The West Sintering Process;* [Chiefly for iron-ore fines].—E. & M. J., Sept.7,1912; p. 459; 800 w*; 25c.

Wittich, L. L.—*Profits in Lead Smelting;* [Joplin District, Mo.].—M. & S. P., Oct.19, p. 503; 800 w*; 20c.

Youchékvitch, N.—*La théorie de la fusion des minerais de cuivre;* [The theory of copper smelting; experiments with copper and pyrite ores in roasting and smelting furnaces at temperatures below melting].—Soc. Russe de Métallurgie, Rev., 1911, pp. 489-514; $2. Abstract in French in Rev. de Mét'gie, June,1912; p. 308; 1000 w*; $1.15.

"F. M. S."—*Lluvia de Oro Refining;* [Suggests improvements].—E. & M. J., July 6,1912; p. 6; 600 w; 25c.

———. *Australasian Institute of Mining Engineers; New South Wales Trip,* 1912; [Gt. Cobar and Mt. Boppy mines, mills and smelters; Port Kembla and Cockle Creek smelters and electrolytic refineries].—Australian Mng. Standd., June20,1912; p. 581; 4200 w; 35c.

———. *Antimony Production;* [Possibilities of smelter at Tacoma for Vault Creek, Alaska, ores].—M. & S. P., Oct.19, p. 489; 500 w; 20c.

———. *Development of Copper Converter Practice.*—M. & S. P., Nov.2, p. 552; 1800 w; 20c.

———. *Die Antimondarstellung nach dem Reduktionsverfahren auf den Antimonhütten von Blesle;* [Reduction process for antimony at the Blesle antimony works, France; from Rev. Scientifiq., 1911, No. 14].—Oestr. Zts. f. Berg- & H-wesen, May 25, 1912; p. 293; 600 w; 45c.

———. *La Fabrication des Électrodes;* [The manufacture of electrodes].

———. *Lead Mining and Smelting in Scotland.*—Canadian Mng. Jnl., Oct.1, p. 678; 1000 w; 25c.

———. *La pratique du grillage de la blende;* [The practice in Europe and America of blende roasting].—Echo d. Mines, Oct.10, p. 1052; 2000 w; 35c.

———. *Le Traitement Électrique des Minerais d'Étain;* [The electric treatment of tin ores].—Revue Industrielle, Nov.9, 1912, p. 15; 900 w; 25 cts.

———. *New Colorado Smelting Schedules.*—E. & M. J., Sept.14,1912; p. 509; 1000 w; 25c.

———. *Perfectionnements Apportés aux Fours Électriques et à leur Application à la Fabrication de l'Acier;* [Improvements in electric furnaces and their application to the manufacture of steel].—Revue Industrielle, Nov.23,1912, p. 10; 1200 w; 25 cts.; also in Revista Minera, Nov.16, p. 533; 35 cts..

———. *Present Smelting Rates in Utah.*—E. & M. J., July20,1912; p. 125; 1500 w; 25c.

———. *Progress of Basic Converting.*—E. & M. J., Aug.31,1912; p. 408; 400 w; 25c.

———. *Smoke Troubles at Sudbury.*—E. & M. J., Nov.23.1912; p. 974; 250 w; 25c.

———. *Standard Specification for Refractory Material;* [Silica and siliceous brick, blocks, and tiles; report of committee of Inst. of Gas Engrs. of Gt. Britain].—Canadian Engr., Aug.15,1912; p. 331; 1400 w; 25c.

———. *The Producer and Smelter of Lead Ores;* [Editorial discussion of prices-penalties problem].—Met. & Cheml. Engg., July,1912; p. 389; 600 w; 35c.

———. *The Proper Handling of Crucibles.*—Mechl. World, Aug.30,1912; p. 106; 1200 w; 35c.

———. *Tin Ore Dressing and Metallurgy.*—Mines & Minerals, Sept., p. 89; 2000 w*; 35c.

———. *The Witwatersrand Co-Operative Smelting Works;* [For treatment of gold-bearing by-products of Rand mines].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 332; 800 w; $1.

———. *Treatment of California Zinc-Copper Ores.*—Met. & Chemi. Engg., Sept., 1912; p. 564; 600 w; 35c.

Fuels and Combustion

Blackwell, H. C.—*Surface Combustion;* [Read to Iowa District Gas Asso.].—Chemi. Engr., Sept.,1912; p. 91; 1200 w*; 35c.

Dunn, J. A.—*Fuel Economy in Zinc Metallurgy, Power Production and Mining;* [Discusses Parkinson furnace].—Met. & Chemi. Engg., Aug.,1912; p. 498; 1800 w; 35c.

Ellis, C.—*Flameless Combustion;* [With discussion by Lucke, Kent and others; principally on Bone and Lucke patents, and use of coke oven and explosive-gas mixtures].—Amer. Inst. Mng. Engrs., Bull. 69; Sept.,1912; pp. 945-977*; $1.15.

Hoppe, —. *Moderne Oelheizanlagen;* [Modern oil-burning equipment in foundries and smelting works].—Eisen Ztg., Aug.31,1912; p. 623; 1600 w; 35c.

Kühl, H.—*Messung des Kohlenverbrauch von Drehrohröfen durch Rauchgasanalyse;* [Estimating the coal consumption of rotary tubular ovens by smoke analysis; read to Ver. Deu. Portlandzementfabrikanten].—Ton Industrie Ztg., Sept.7,1912; p. 1447; 2500 w; 35c.

Kundsen, E.—*Die technischen Verbesserungen und ökonomischen Resultate beim Kupferschmelzen, Prozess Knudsen;* [Technical improvements and economies in the Knudsen pyritic smelting of copper; read to Allgm. Bergmannstag, Vienna, 1912; abstract].—Montanist. Rundschau, Sept.15, 1912; p. 952; 1000 w; 50c.

Leefelder, R.—*Unsere Brennmaterialen; Ihre Untersuchung und Verbrennung;* [Fuels, their examination and combustion].—Berlin, 1912; 81 pp.*; $1.

Le Chatelier, H.—*Le Chauffage Industriel;* [Industrial heating by coal, gases, oil, etc., with special reference to metallurgic furnaces].—Paris, 1912; 528 pp.; 96 figs.; $3 (book).

Le Chatelier, H.—*Leçons sur le carbone, la combustion et les lois chimiques;* [Notes on coal and carbon, combustion and chemical laws involved].—Paris, 1911; 456 pp.; 54 figs.; $3 (book).

Nagel, O.—*Ueber die Gewinnung des Zinks im Hochofen mit Hilfe von Wassergas;* [Use of water-gas in the production of zinc in the blast furnace].—Chemiker Ztg., June4,1912; p. 621; 1000 w; 35c.

Robertson, W. F.—*Experiments in Oil-Smelting in Br. Columbia;* [Boundary district, copper at Van Anda furnace].—Met. & Chemi. Engg., Sept.,1912; p. 543; 800 w*; 35c.

Schmatolla, E.—*Gaserzeuger, Gasfeuerungen und Öfen, insbesondere für natürlichen Zug und natürlichen Druck;* [Gas-producers, gas-firing and ovens, especially for natural draft and natural pressure].—Berlin and N. Y.; 1912 (2d edition), Vol. I., Parts 1-2; $1 (book).

Schnurpfeil, H. — *Die Glasschmelzöfen und ihre Feuerungsanlagen;* [Smelting furnaces in the glass industry, and their firing].—Dresden, 1912; pp. —*; $2. (book).

Sonnabend, W.—*Die Wirtschaftlichkeit der Oelheizung in der Hütten- und Walztechnik;* [Industrial economy of oil fuel in smelters and rolling mills].—Centralbl. d. Hütten & Walzwerke, July15,1912; p. 372; 500 w; 35c.

Sonnabend, W.—*Oefen mit Rohölfeuerung in der Eisen-Industrie;* [French "Progress" crucible, burning crude oil].—Petroleum, July17,1912; p. 1121; 1000 w*; 45c.

Taudevin, E. P.—*Natural-Draft Gas Furnaces;* [Lecture before Glasgow & W. of Scotland Technical Inst.].—Iron & Coal Trades Rev., July12,1912; p. 54; 2200 w*; 35c.

Uehling, E. A.—*Combustion of Coal;* [Read to Ohio Soc. of Mechl. Engrs., May, 1912].—Power, July9,1912; p. 42; 1000 w; 15c.

Venator, Wm.—*Ueber einen Schmelzofen mit Oelfeuerung;* [The Putensen oil burner for oil-fired smelting furnaces, and economy tests of oil firing for smelting].—Giesserei Ztg., June1,1912; p. 344; June15, p. —; 2000 w*; 65c.

Wangemann, —. *Flammenlose Gasfeuerung;* [Flameless combustion of gases].—Centralbl. d. Hütten & Walzwerke, July25,-1912; p. 391; 1200 w; 35c.

Dr. G.—*Oelfeuerungen für Metallurgische Zwecke;* [Application of oil-burning in metallurgy in Europe and America].—Petroleum, July17,1912; p. 1123; 1000 w*; 45c.

———. *Die Gussstahlerzeugung im Stockschen Konverter;* [Steel castings production in the Stock oil-fired converter; from Génie Civil, 1912, No. 10].—Oestr. Zts. f. Berg- & H-wesen, Apr.27,1912; p. 233; 1200 w*; 45c.

———. *Neue Method der Erhitzung von Schmelztiegeln durch Gas;* [Bone flameless combustion process with gas fuels applied to smelting crucibles; German abstract from "Foundry"].—Eisen Ztg., June8,1912; p. 422; 1000 w; 35c.

———. *Neuere Oelfeuerungen für Dampfkesselanlagen;* [Newer oil vaporizers and burning equipment for boiler plants].—Elektrotechn. Anzeiger, July18,1912; p. 727-729*; 45c.

———. *Surface Combustion;* [Discusses Bone's work and earlier work of Prof. C. E. Lucke of Columbia].—Met. & Chemi. Engg., July,1912; p. 409; 1500 w*; 35c.

Charging; Discharging; Slags

Baker, D. — *Automatic Blast-Furnace Charging;* [Baker mechanical sequence controller].—Iron Age, Apr.4,1912; p. 840; 1600 w*; 30c. Abstract in Iron & Coal Trades Rev., May24,1912; p. 842; 1000 w*; 35c.

Bellinger, H. C.—*Presidential Address, Australasian Institute of Mining Engineers;* [Chiefly on metallurgy of lead and copper; action of alumina in slags].—Mng. & Engg. Rev., June,1912; p. 374; 2500 w; 45c. Also in Australian Mng. Standd., June6, p. 529; 3000 w; 35c.

Blau, E.—*Kontrolle über Materialförderung und Materialverbrauch durch selbsttätige Wägevorrichtungen;* [Mechanical control of the supply and consumption of crude material by automatic weighing devices].—Techn. u. Ökon., Oct.11, p. 1042; 1200 w; 35c.

Chauvenet, R.—*Chemical Arithmetic and Calculation of Furnace Charges.*—Philadelphia, 1912; 302 pp; $4 (book).

Eilers, A.—*Preparing Furnace Charges*

and Lead Smelting.—E. & M. J., July27, 1912; p. 147; 1000 w; 25c.

Greene, A. E., and R. Amberg.—*Function of Slag in Steel Refining.*—Met. & Cheml. Engg., Oct.,1912; p. 656; 600 w; 35c.

Grimshaw, R.—*Mechanische Beschickung von Hochöfen;* [Mechanical charging of blast-furnaces].—Centralbl. d. Hütten & Walzwerke, July5,1912; p. 353; 400 w; 35c.

Groneman, J. L. Th.—*Automatische Beschickungs-Vorrichtung für Kupolöfen;* [Automatic and portable charging device for cupolas].—Giesserei Ztg., Sept.15,1912; p. 561; 2700 w*; 35c.

Hardinge, H. W.—*Wet Concentration of Furnace Slags;* [For recovering gold and silver].—E. & M. J., June29,1912; p. 1262; 1100 w; 25c.

Hillebrand, E., and Th. Löhe.—*Nachtrag zur Vorherd Frage;* [Discussion of the fore-hearth controversy].—Eisen Ztg., Oct.5, p. 703; 1800 w*; 35c.

Jantzen, G.—*Air Granulation of Molten Slag;* [at Buderus Iron Works, Wetzlar].—Iron & Coal Trades Rev., Oct.18, p. 636; 1500 w*; 35c.

Johnson, J. E.—*The Effect of Alumina in Blast-Furnace Slags.*—Amer. Inst. Mng. Engrs., Bull. 70; Oct.,1912; pp. 1123-1132.

Jollibois, P.—*On Some Metallic Phosphides;* [Tin, nickel, zinc].—Internatnl. Asso. f. Testg. Materials, Proc., Vol. II, No. 10; 1912; 4 pp; 95c.

Knaff, A.—*Zur Frage des Schllackenbetons;* [The use of slag in concrete].—Ton Industrie Ztg., Oct.26, p. 1703; 1500 w; 35c.

Löhe, T.—*Ueber kippbare Vorherde;* [Rotary or tillable fore-hearths].—Eisen Ztg., Aug.31,1912; p. 621; 1200 w*; 35c.

Mostowitsch, Wl.—*Die Berechnung der Beschickung für Kupfersteinschmelzen im Schachtofen;* [Computing the charge of copper matte in the blast furnace].—Metallurgie, Sept.8,1912; pp. 559-568; Sept.22, pp. —; 75c.

Neumann, —. *Eine neue Einrichtung zur Beschickung von Siemens-Martin-Oefen mit flüssigem Roheisen;* [New charging device for feeding liquid pig-iron to the Siemens Martin furnace].—Stahl & Eisen, Sept.19, pp. 1568-1570*; 75c.

Pacher, —. *Ueber verschiedene Arten von Schlackeneinschlüssen im Stahl, ihre mutmassliche Herkunft und ihre Verminderung;* [The various slag inclosures in steel, their origin and prevention].—Stahl & Eisen, Oct.3, pp. 1647-1655*; 50c.

Passow, H. — *Hochofenzement;* [Blast Furnace Slag Cement; production and uses].—Berlin, 1912; 61 pp.; 75c; (pamphlet).

Poupin, A.—*Trap Spout for Copper Blast Furnace.*—E. & M. J., Oct. 26, p. 785; 600 w*; 25c.

Rosenhain, W.—*Slag Enclosures.*—Internatnl. Asso. f. Testg. Materials, Proc.; Vol. II, No. 10; 1912; 22 pp*; 95c.

Stahl, W.—*Ueber Entfernung resp. Verschlackung der Beimengungen des Kupfers im Kupferraffinierbetrieb;* [The nature of silicate slags in copper smelting and refining at temperatures of 1200 to 1450° C.].—Metallurgie, June8,1912; pp. 362-367; June 22, p. —; $1.

———. *Copper Blast Furnace Settlers.*—E. & M. J., Oct.12, p. 689; 400 w*; 25c.

———. *Modern Soaking Pits and the Removal of Slag;* [from "Stahl & Eisen"].—Iron & Coal Trades Rev., Oct.25, p. 665; 1000 w*; 35c.

———. *Narrow-Gage Railway Installation;* [Hunt equipment for handling ores, cement materials, ashes, clinker, etc.].—Amer. Fertilizer, June15,1912; p. 48; p. 52; 1000 w*; 25c.

———. *Neue Maschine zum Giessen und Verladen von Giessereiroheisen;* [New pouring machines for foundry pig iron].—Giesserei Ztg., Aug.1,1912; p. 469; 1000 w; 35c.

———. *Open-Hearth Chargers for South Wales.*—Iron & Coal Trades Rev., Oct.4, p. 545; 600 w*; 45c.

———. *The Bennett Pouring Spoon;* [for converters].—Mining & Engg. World, Sept. 21,1912; p. 548; 200 w*; 10c.

———. *The Metallurgy of Mixing Charges in the Foundry Cupola;* [from Giesserei Ztg.].—Castings, July, p. 106; 1000 w; 25c.

Fume, Gas and Flue Dust

For blast-furnace gas-engines see under Combustion Engines.

Bradley, L.—*Electrical Precipitation of Suspended Particles;* [Cottrell process; read to 8th Internatnl. Congr. of Appl. Chem'y; abstract].—Met. & Cheml. Engg., Oct.,1912; p. 686; 2400 w; 35c. Also in Mining & Engg. World, Oct.19, p. 709; 2400 w; 10c.

Carlyle.—*Copper Smelting at Kyshtim.*—See under Copper.

Cohen, J. B. and A. G. Ruston.—*Smoke, A Study of Town Air.*—London, 1912; 96 pp.; $1.75 (book).

Cottrell, F. G.—*Electrical Fume Precipitation;* [at power plants, cement mills, lead and copper smelters].—Amer. Inst. Mng. Engrs., Bull. 67, July,1912; pp. 667-680*; $1.15.

Eilers, A.—*Notes on Bag Filtration Plants;* [Murray, Utah, and Omaha, Nebr., plants for recovering lead fume from blast furnace and converters; read to Internatnl. Congr. of Appl. Chem'y; abstract].—Met. & Cheml. Engg., Sept. Suppl; 1912; p. 589; 2000 w*; 35c.

Feld, W.—*Centrifugal Gas Washer;* [Purification of blast-furnace and producer gases; recovery of metal dust from lead and copper smelter gases; tar from coke gases].—Met. & Cheml. Engg., July, 1912; p. 436; 2000 w*; 35c.

Gouvy, A.—*Epuration des gaz de hauts fourneaux;* [Purification of blast furnace gases].—Rev. de Métall'gie, Oct.,1912; pp. 771-798*; $1.15.

Gradenwitz, Alfr.—*Mud Disposal in Blast-Furnace-Gas Purification;* [Clarification of water used].—E. & M. J., July6, 1912; p. 27; 1000 w*; 25c.

Johnston, A. Mc. A.—*Note on Dust Determination by Filtration Through Sugar.*—Cheml. Met. & Mng. Soc. of S. Afr., Jnl; May,1912; p. 442; 500 w*; 90c.

Kullgren, K.—*Eine Methode zur Bestimmung schwefliger Säure in Luft;* [Estimation of sulphuric acid in air].—Berlin, 1912; 20 pp.*; 75c; (pamphlet).

Laschinger, E. J.—*New Apparatus for Sampling Air for Dust.*—Cheml. Met. & Mng. Soc. of S. Afr., Jnl; May,1912; p. 443; 2200 w*; 90c.

Martin, A. H.—*Fighting Smelter Fumes in California.*—Mng. Jnl., Aug.31,1912; p. 870; 1200 w; 35c.

Meier, A. J.—*Meier's Bag-Shaking Device;* [U. S. Pat. No. 1,030,477].—E. & M. J., Oct.12, p. 683; 250 w*; 25c.

Metz, N.—*Studien über die im Hochofen zwischen den Eisenerzen und Gasen obwal-*

tenden Verhältnisse; [Studies on the relations between iron ores and the gases in the blast furnace].—Berlin Techn. Hochschule dissert., 1912; 30 pp.; 14 figs.; $1 (thesis).

Metzler, R.—*Ueber ein neues Gasreinigungsverfahren;* [New gas purifying process, especially blast-furnace gas for gas engines; read to Bergmannstag, Vienna, 1912; abstract].—Montanist. Rundschau, Sept.15, 1912; p. 950; 1000 w; 50c.

Neumann, B.—*Metallurgy of Copper in 1911;* [in German].—See Copper.

Pietrusky, K.—*Die Cottrellsche Verfahren feine Stoffteilchen mittels elektrischen Stromes niederzuschlagen;* [The Cottrell process of dust precipitation by electricity].—Zts. f. angew. Chemie, Oct.11, p. 2107-2110*; 50c.

Pulsifer, H. B.—*Metallurgy of Lead; Flue Dust, Fume and Acid.*—Salt Lake Mng. Rev., Nov.15, p. 19; Nov.30, p. 18; 6500 w*; 25c.

Saunders, —. *Metallurgy at Mt. Morgan, Queensland.*—See Copper.

Schmidt, W. A.—*The Control of Dust in Portland Cement Manufacture by the Cottrell Precipitation Processes;* [Read to Internatnl. Congr. of Appl. Chem'y; abstract].—Met. & Cheml. Engg., Sept.12,1912; p. 611; 1200 w; 35c.

Strong, W. W.—*Electrical Precipitation of Suspended Matter in Gases.*—Franklin Inst., Jnl.; Sept.,1912; pp. 239-264*; 65c.

Terman, J. E.—*Flue-Gas Analysis for Beginners;* [Orsat apparatus].— Power, Sept.10,1912; p. 380; 1500 w*; 15c.

Westby, G. C.—*Smelter Smoke Conservation;* [Neutralizing with chilled slag, and recovery of by-products; read to 8th Internatnl. Congr. Appl. Chem'y].—Jnl. of Ind'l & Engg. Chem'y, Oct.,1912; p. 725; 3200 w; 65c.

———. *Costs of Producing Sulphuric Acid at Port Wallaroo Smelter, S. Australia.*—E. & M. J., Aug.31,1912; p. 402; 250 w; 25c.

———. *Estimation of Lead in Smelter Gases.*—Mng. Mag., Aug.,1912; p. 147; 1200 w; 45c.

———. *Laboratory Apparatus for Thiogen Process Tests.*—E. & M. J., Sept.7, 1912; p. 445; 400 w*; 25c.

———. *New Dust Catching System;* [at Cerro de Pasco smelter].—Mex. Mng. Jnl., July,1912; p. 43; 1000 w; 35c.

———. *The Problem of Fines in Smelting.*—M. & S. P., Oct.5,1912; p. 425; 1200 w; 20c.

———. *The Thiogen Process of Fume Control.*—Met. & Cheml. Engg., Nov.,1912; p. 710; 700 w; 35c.

Refractories, Walls and Lining

Boeck, P. A.—*Alundum as a Refractory Material;* [Read to Internatnl. Congr. Appl. Chem'y; abstract].—Met. & Cheml. Engg., Sept. Suppl.; 1912; p. 581; 400 w; 35c.

Keller, H. A.—*Basic Copper Converting.*—E. & M. J., Nov.2; p. 822; 300 w; 25c.

Lange, —. *Ueber Silikatsteine für Martinöfen;* [The selection of silica for Martin furnaces].—Stahl & Eisen, Oct.17, pp. 1729-1737*; 75c.

Stansfield, A., D. L. McLeod, and J. W. McMahon.—*Electric Resistivity of Firebricks at High Temperatures;* [Read to Amer. Electrocheml. Soc.; abstract].—Met. & Cheml. Engg., Nov.,1912; p. 746; 600 w; 35c.

———. *Die feuerfesten Materialen unter besonderer Berücksichtigung des Giessereifaches;* [Refractories with special reference to the foundry].—Eisen Ztg., Oct.19, p. 737; Oct.26, p. —; 2500 w; 50c.

Draft, Blast; Fuels, Combustion

Amsler, W. O., J. W. Richards, and F. Geistharp.—*Exothermic Steel;* [Discussion of thermochemical reactions using bauxite and potash feldspar fluxes].—Met. & Cheml. Engg., Nov.,1912; p. 713; 1000 w; 35c.

Bert, Edw.—*Drying Air for Blast Furnaces.*—Met. & Cheml. Engg., Sept.,1912; p. 510; 250 w; 35c.

Brown, Ev.—*Designing Brick and Steel Chimneys.*—Power, Oct.8,1912; p. 528; 2100 w; 15c.

Dahms, A.—*Neuere Fortschritte in der technischen Verwendung der Teerprodukte;* [Recent innovations in technical uses of coal-tar products; includes notes on smelting of tungsten and copper oxide ores].—Zts. f. angew. Chemie, Oct.4, pp. 2049-2058*; 50c. Also in Techn. Blätter, Nov.2, p. 346; Nov.9, p. 353; 6000 w*; 50c.

Ehrenwerth, Jos. von.—*Trocknung des Hochofenwindes;* [Advantages of drying the blast; read to Bergmannstag, Vienna, Sept., 1912; abstract].—Montanist. Rundschau, Sept.15,1912; p. 966; 1000 w; 50c.

Feder, H. V.—*The Design and Construction of Smokestacks.*—Canadian Engr., Sept.19,1912; p. 471; 2000 w*; 25c.

Guess, G. A.—*Oxygen Efficiency of the Pyritic Furnace.*—E. & M. J., Nov.16, p. 925; 700 w; 25c.

Hollway, J.—*Treating Sulphides in the Bessemer Converter;* [Republication of some experiments in 1878, on pyritic smelting].—M. & S. P., Nov.2, p. 557; 5000 w*; 20c.

Jones, T. J.—*Raising a Stack While in Operation.*—E. & M. J., Sept.14,1912; p. 492; 500 w*; 25c.

Kothny, E.—*Gaserspärnisse in Hüttenbetrieben;* [Gas fuel economies in metallurgic works; gas-producer and combustion control].—Centralbl. d. Hütten- & Walzwerke, Oct.25,1912; p. 562; 2700 w; 45c.

zur Nedden, F.—*Construction and Operation of Turbo-Blowers and Compressors;* [1: Fundamentals of design].—Engg. Mag., July,1912; pp. 547-562*; 35c.

Pietzsch, —. *Der Einfluss von Rissen auf die Standsicherheit der Schornsteine;* [Influence of cracks on the safe standing of chimneys].—Zts. f. Dampfk. Betr., June21, 1912; pp. 263-266*; 90c.

Schott, O.—*Die Anwendung künstlichen Zuges beim Brennen von Kalk und Zement;* [The use of artificial draft in burning lime and cement].—Ton Industrie Ztg., Aug.29, 1912; p. 1399; 2000 w; 35c.

Sonnabend, W.—*Anwendung von Schmelzöfen mit Rohölfeuerung;* [Tests of oil fired smelting furnaces on ferromanganese].—Centralbl. d. Hütten & Walzwerke, Oct. 5, p. 523; 500 w; 35c.

Sternberg, R.—*Ueber Fabrikschornsteine;* [Some ornamental types of chimneys].—Ton Industrie Ztg., Sept.5,1912; p. 1435; 750 w*; 35c.

Walter, B.—*Drying Air for Blast Furnaces;* [Carnegie Steel Co., Pittsburg plant; from Engrs. Soc. of W. Penn.; Proc., May, 1912].—Met. & Cheml. Engg., Aug.,1912; p. 471; 6000 w*; 35c.

Watson, J. C.—*Chart for Determining*

Blowing Engine Speed.—E. & M. J., Sept.28, 1912; p. 593; 500 w; 25c.

———. *A Protected Concrete Chimney;* [at Weber works of International Harvester Co., Auburn, Ill.].—Engg. Record, July6, 1912; p. 9; 600 w; 20c.

———. *Der Kupolofen mit Vorgewärmter Gebläseluft, System P. Cérieys;* [The Cérieys cupola with prewarmed blast; German abstract from "Fonderie Moderne"].—Eisen Ztg., July13,1912; p. 510; July20, p. —; 1800 w; 50c.

———. *Motor-Driven Forced Draught Blower;* [Buffalo Forge Co. blower].—Iron Age, Sept.14,1912; p. 577; 600 w*; 30c.

———. *New Parsons Turbo-Blower Plant at Mt. Morgan Copper Reduction Plant.*—Queensland Mng. Jnl., Sept.,1912; p. 427; 500 w*; 35c.

———. *Westinghouse Turbo-Blowers and Compressors.*—Coll'y Guardn., June28,1912; p. 1289; 1800 w*; 35c.

Pyrometry

Day, A. L.—*Recent Advances in High-Temperature Gas Thermometry.*—Faraday Soc., Trans., Vol. 7, Pts. 1-2; 1911; pp. 136-144*; $4.

Deinert, G. — *Elektrische Temperatur Messapparate und ihre Anwendung in Hüttenwerken;* [Electrical pyrometers and their applications in metallurg.e works].—Centralbl. d. Hütten & Walzwerke, Sept.15, 1912; p. 486; 2500 w*; 35c.

Féry, Chas.—*Stellar Pyrometry.*—Faraday Soc., Trans.; Vol. 7, Pts. 1-2; 1912; pp. 165-167*; $4.

Foster, C. E. and R. S. Whipple.—*Thermo-Electric Pyrometry.*—Electrician, Sept. 13,1912; p. 951; 1000 w; 35c.

Lindeck, Hoffman, Meissner and others.—*Elektrische und optische Temperaturmessung;* [Electrical and optical pyrometry; abstract of report of Physikal.-Techn. Reichsanstalt, Vienna, 1912].—Zts. f. Elektrochemie, Sept.15,1912; p. 830; 2000 w*; 50c.

Paul, R. W.—*Pyrometry;* [Modern developments in thermoelectric and resistance methods].—Electrician, Sept.20,1912; p. 994; 450 w; 35c.

Shook, G. A.—*Calibration of Radiation Pyrometers.*—Met. & Chemi. Engg., July, 1912; p. 416; 3600 w*; 35c.

Shook, G. A.—*Radiation Pyrometry; V: Relation between Black Body Temperature and True Temperature.*—Met. & Cheml. Engg., Sept.,1912; p. 534; 1000 w*; 35c.

Shook, G. A.—*Determination of Very High Temperatures.* Met. & Cheml. Engg., Aug.,1912; p. 478; 2400 w*; 35c.

Stupakoff, S. H.—*Practical Pyrometry in the Iron and Steel Industries.*—Engrs. Soc. of W. Penn.; Jnl.; July,1912; pp. —; 75c. Abstract in Iron Age, Aug.15, p. 355; 7000 w; 30c.

———. *Quarzglas Fernthermometer;* [Quartzglass radiation thermometer].—Zts. f. Dampfkessel Betr., July12,1912; pp. 291-294*; 50c.

———. *The Leskolc Optical Pyrometer.*—Iron & Coal Trades Rev., Sept.6,1912; p. 346; 750 w*; 35c.

Refractories

Blackie, A.—*On the Behavior of Fused Silica at High Temperatures.*—Faraday Soc., Trans., Vol. 7, Pts. 1-2; 1911; pp. 158-165*; $4.

Bleininger, A. V. and G. H. Brown.—*The Testing of Clay Refractories, with Special Reference to Load-Carrying Capacity at Furnace Temperatures.*—U. S. Bur. Standards, Technologic Paper No. 7; 1912; 78 pp.*; 50c.

Burgess, G. K.—*The Present Status of the Temperature Scale.*—8th Internatnl. Congr. of Appl. Chem'y, 1912; Vol. 22, pp. 53-63.

End ll, K.—*Ueber die Umwandlungen der Kieselsäure bei höheren Temperaturen;* [Transformations of silica and Cristobalite at higher temperatures; read to Deu. Naturforscher, Münster, 1912]. — Chemiker Ztg. Sept.24,1912; p. 1109; 500 w; 35c.

Hamilton, W. L.—*Preparation of Firebrick for Use in Lime Kilns;* [Read to Natnl. Lime Manffrs. Asso.; abstract].—Brick, Sept.15,1912; p. 233; 1800 w; 20c.

Kanolt, C. W.—*Melting Points of Fire Bricks.*—Canadian Engr., Aug.22,1912; p. 348; 750 w; 25c.

Kowalke, O. L.—*Base-Metal Thermocouples;* [Read to Internatnl. Congr. of Appl. Chem'y; brief abstract].—Met. & Cheml. Engg., Sept. Suppl.; 1912; p. 585; 300 w; 35c.

Mellor, J. W.—*Some Notes on the Action of Heat on Fire Clay;* [from Birmingham Engg. & Mng. Jnl., July.1911; pp. 459-464].—Cheml. Met. & Mng. Soc. of S. Afr., Jnl., April,1912; p. 426; 1800 w; 90c.

Stone, S. R.—*Bauxite Brick for Kiln or Furnace Lining;* [Preparation and advantages for lining cement kilns and lead refining furnaces; chiefly on Arkansas product].—Mining & Engg. World, Aug.24,1912; p. 341; 2500 w; 10c.

Stupakoff, S. H.—*Practical Pyrometry in the Iron and Steel Industries.*—Engrs. Soc. of W. Penn., Proc., No. 6, 1912; pp. 499-567.

Tertre, Le Gall du.—*Sur les briques en silice;* [Notes on silica brick].—Rev. d. Matériaux, Oct.,1912; p. 109-B; 1000 w; 45c.

Windszus, P.—*Resistance of Refractory Ware Against Abrupt Changes of Temperature.*—Met. & Cheml. Engg., Oct.,1912; p. 662; 500 w; 35c.

For molding sands, see Part II of the Index under "Stone; Sands; Gravels,"—under Non-Metals (Structurals and Ceramics).

———. *Manufacture of Fire-Brick at Westville, N. S.*—Canadian Mng. Jnl., Sept. 15,1912; p. 654; 1000 w*; 35c.

TESTING OF METALS

See also "Iron and Steel."

Allen, Irving C., and Jacobs, Walter A.—*Methods for the Determination of Water in Petroleum and Its Products.*—Tech. Paper 25, Petrol. Tech. 1, U. S. Bureau of Mines, pp* 13.

Baucke, H.—*On the Action of Electrolytes on Metals under Stress;* [in restoring stability].—Internatnl. Asso. f. Testg. Materials, Vol. II, No. 13; 1912; 9 pp*; 95c.

Baucke, H.—*Behavior of Copper under the Impact Bending Test on Notched Bars.*—Internatnl. Asso. f. Testing Materials, Bull. 9, June,1912; 13 pp.*; 90c.

Benedicks, C.—*On the Electrical Disintegration of Metals and Its Possible Utilization for Testing Purposes.*—Internatnl.

Asso. f. Testg. Materials, Proc.; Vol. II, No. 10; 1912; 18 pp*; 95c.

Bregowsky, I. M. and L. W. Spring.—*The Effect of High Temperatures on the Physical Properties of Some Alloys;* [Use of superheated steam in machinery].—Internatnl. Asso. f. Testg. Materials, Vol. II, No. 13; 1912; 16 pp; 95c.

Clennell, J. E.—*Estimation of Lead in Cyanide Solutions.*—Mex. Mg. Jnl., Dec., 1912; p. 17; 1800 w; 25c.

Cohen, E.—*Neues über die Forcierkrankheit;* [Recent developments on the fatigue" of metals].—Zts. f. Elektrochemie, July15,1912; p. 616; 1800 w; 75c.

Damour, A.—*Application of the Methods of Mechanical Testing Adopted for Other Metals to Foundry-Pig Testing.*—Internatnl. Asso. f. Testing Materials, Bull. 9, June, 1912; 8 pp.*; 90c.

Davidenkoff, N.—*Theory of a Tensile Impact Tester, and the Error Introduced in Using the Machine.*—Internatnl. Asso. f. Testg. Materials, Proc.; Vol. 2, No. 10; 1912; 14 pp*; 95c.

Dean, W. R.—*Foundry Tests and Foundry Practice;* [Brass].—Amer. Inst. of Metals, Sept.,1911; Paper No. 13; 8 pp.; 50c.

Abstract in Cheml. Engr., Oct., p. 147; 2000 w; 35c.

Gallander, O.—*Measurement of the Depth of Cracks in Materials Which Conduct Electricity.*—Internatnl. Asso. f. Testg. Materials, Vol. II, No. 11; 1912; 6 pp.*; 95c.

Greger, O.—*The Connection Between the Yield Point and the Buckling Load in Bars of the Same Material.*—Internatnl. Asso. f. Testg. Materials, Vol. II, No. 11; 1912; 7 pp.*; 95c.

Guertler, W.—*Die Leitfähigkeitsmessungen an Legierungen als Methode zur Bestimmung ihrer Konstitution; die "Resistometrische" Methode;* [Electrical conductivity of alloys as a means of determining their constitution; the resistometric method].—Zts. f. Elektrochemie, July15,1912; p. 601; 12,000 w; 75c.

Guillery, R.—*On the Tests of Hardness, Elastic Limit and Resilience.*—Internatnl. Asso. f. Testg. Materials, Vol. II, No. 11; 1912; 21 pp.*; 95c.

Guillery, R.—*Etude sur les nouvelles méthodes d'essais mécaniques des métaux;* [Notes on some new methods of testing metals; tensile strength, elastic limit; Brinell test].—Rev. Practiq. d. Ind's Métal'giq., July,1912; p. 5; Aug., p. 2; Sept., p. 2; 5000 w*; 75c.

Guillet, L.—*General Principles for the Specifications for Copper.*—Internatnl. Asso. f. Testg. Materials, Vol. II, No. 11; 1912; 8 pp.*; 95c.

Hanson, H. H., and W. K. Lewis.—*A Method for Testing the Mutual Corrosive Effect in Metals.*—8th Internatnl. Congr. of Appl. Chem'y, 1912; Vol. 21, pp. 43-51.

Huntingdon, A. K.—*The Effect of Temperatures Higher than Atmospheric on Tensile Tests of Copper and its Alloys, and a Comparison with Wrought Iron and Steel;* [Read to Inst. of Metals].—Engnrg., Sept. 27,1912; p. 437; (paper); p. 434 (discussion); 3000 w*; 35c.

Lawson, T. R. and J. A. Capp.—*Thermoelectric Indication of Strain as a Testing Method;* [Determining elastic limit by thermoelectric couple].—Internatnl. Asso. f. Testg. Materials, Vol. II, No. 13; 1912; 32 pp*; 95c.

Martens, A.—*On the Reliability of the Institutions, Machines and Experiments for Testing the Strengths of Materials.*—Internatnl. Asso. f. Testg. Materials, Bull. 9, June, 1912; 21 pp.; plates; 90c.

Maxwell, W. H.—*The Deterioration of Metals in Engineering Works.*—Engg. Rev., Sept.,1912; p. 89; 4000 w; 35c.

Pecoraro, N.—*Experimental Tests of White Metals for Engines.*—Internatnl. Asso. f. Testg. Materials, Proc., Vol. II, No. 13, 1912; 19 pp*; 95c.

Robin, F.—*Variations de la durée du son des alliages en fonction de la température;* [Variability in duration of the resonance of metal alloys as a function of temperature].—Rev. de Métallurgie, Aug.,1912; p. 618-637*; $1.15.

Tammann, G.—*Ueber die Abänderung der Eigenschaften bei der Bearbeitung von Metallen;* [The alteration of characteristic properties in the working of metals].—Zts. f. Elektrochemie, July15,1912; p. 585; 10,000 w; 75c.

Webster, W. R.—*Effect of Cold Working on the Physical Properties of Metals.*—Internatnl. Asso. f. Testg. Materials, Vol. II, No. 13; 6 pp*; 95c.

———. *Die Prüfung galvanisierten Eisendrahtes;* [Testing galvanized iron and steel wires and cables; from Kemi och Bergvetenskap, 1912, No. 5].—Centralbl. d. Hütten & Walzwerke, July15,1912; p. 372; 6000 w; 35c.

METALLOGRAPHY

See also under "Iron and Steel."

Baucke, H.—*On Some Recent Micrographical Investigations of Copper.*—Internatnl. Asso. f. Testg. Materials, Vol. II, No. 11; 1912; 13 pp.*; 95c.

Beilby, G. T.—*The Solidification of Metals from the Liquid State;* [Read to Inst of Metals].—Engnrg., Sept.27,1912; p. 427; 1800 w*; 35c.

Broniewski, W.—*Relations between the Structure of Alloys and Their Electric Properties;* [Tests of aluminum-copper alloys].—Internatnl. Asso. f. Testing Materials, Bull. 9, June,1912; 12 pp*; 90c.

Burgess, G. K.—*Metallography and Metallurgy at the U. S. Bureau of Standards.*—Met. & Cheml. Engg., Aug.,1912; p. 467; 2000 w; 35c.

le Chatelier, H.—*Alloys by Superposition;* [Microscopic studies of contact of superimposed fused and cooled contacts; antimony-tin; antimony-silver].—Internatnl. Asso. f. Testing Materials, Proc.; Vol. 2, No. 8; 1912; pp. 12*; 60c.

Ewen, D., and W. Rosenhain.—*Intercrystalline Cohesion in Metals;* [Read to Inst. of Metals; abstract].—Engnrg., Sept. 27,1912; p. 434; 1600 w; 35c.

Goerens, P.—*Einführung in die Metallographie;* [Introduction to Metallography].—Halle, 1912; pp. —; 158 figs.; $4 (book).

Goodale, S. L.—*Metallography Sample Holder.*—Met. & Cheml. Engg., Aug.,1912; p. 477; 500 w*; 35c.

Grand, C.—*Industrial Application of Microscopic Metallography for Controlling the Work Put on Copper and Brasses.*—Internatnl. Asso. f. Testg. Materials, Vol. II, No. 11; 1912; 13 pp.*; 95c.

Gullon, Ed.—*Concepto teórico y práctico de la Metalografía;* [Theory and practical conceptions of metallography].—Madrid, 1912; 58 pp.; $1.50 (pamphlet).

Heyn, E.—*Report on the Progress of Metallography since the Commencement of the Year* 1909 *to the End of the Year* 1911; [Iron and ferro-alloys; copper and copper alloys; aluminum and alloys, lead and alloys, zinc and alloys; bearing alloys, etc.]. —Internatnl. Asso. f. Testg. Materials, Vol. II, No. 11; 1912; 58 pp.*; with bibliography of 540 entries; 95c.

Lothrop, M. T., and C. R. Bulley.—*Standard Magnification for Micrographs.*—Internatnl. Asso. f. Testg. Materials, Vol. II, No. 11; 1912; 4 pp.; 1600 w; 95c.

Maurice, V.—*Note au Sujet de la Métallurgie Microscopique;* [Notes on microscopic metallurgy].—Paris, 1912; 49 pp*; 75c.

Müssing, E.—*Preisentwickelung in der Montan-Industrie seit* 1870; [Evolution of prices in the German mineral and metal industries since 1870].—Augsburg, 1912; chart 130x65 cms.; explanatory sheet; $8.

Robin, F.—*Utility of a Metallographic Nomenclature.*—Internatnl. Asso. f. Testing Materials, Proc.; Vol. 2, No. 8; 1912; 4 pp.; 1000 w; 60c.

Robin, F.—*Traité de Métallographie;* [Manual of Metallography].—Paris, 1912; 464 pp.; 244 figs.; (book).

Wäser, B. and E. H. Schulz.—*Die photographische und microphotographische Wiedergabe elektrolytischer Metallniederschläge;* [Results from the photographic and microphotographic examination of metallic electrolytic precipitates].—Elektrochem. Zts., May,1912; p. 36; 500 w*; 35c.

———. *Micrographical Studies; Memoir on Certain Micrographical Observations of Practical Interest for Valuing and Testing and for Working Metals by Different Methods.*—Internatnl. Asso. f. Testing Materials, Proc., Vol. 8, No. 2; 1912; pp. 11*; 60c.

———. *Moderne Metallmikroskopie;* [Reichert metallographic microscope].—Montanist. Rundschau, Sept.15,1912; p. 968; 1000 w*; 50c.

METALLURGY: GENERAL AND MISCELLANEOUS

Ascione, E.—*Lavorazione dei Metalle;* [The working of the industrial metals].—Milan, 1912; 316 pp.*; $3; (book).

Benedicks, C.—*On Allotropy in General and That of Iron in Particular.*—Iron & Steel Inst., Jnl.; Sept. 1912; 34 pp. with bibliography; 50c. Summary in Iron & Coal Trades Rev., Oct.4, p. 524; 600 w*; 45c.

Berger, L.—*Chinas Bergbau, speziell seine Kohlen- und Eisen-industrie;* [China's mining, especially its coal and iron industry].—Technische Blätter, Nov.30,1912; p. 377; 2400 w*; 35c.

Blau, Ernst.—*Neuere Ausführungen von Drahtseilbahnen für Bergbau- und Hüttenzwecke;* [New achievements in wire-rope tramways for mining and metallurgical purposes].—Montanist. Rundschau, Nov.16, 1912; p. 1205; 1500 w*; 35c.

Bergner, E.—*Lösungen von Gasen in Metallen und Legierungen;* [Solution of gases in metals and alloys].—Leipzig dissert., 1912; 47 pp; $1 (Thesis).

Borchers.—*Metallurgic Progress, Aachen,* 1902-1912; [in German].—See Aluminum.

Burgess, G. K.—*Metallography and Metallurgy at the U. S. Bureau of Standards.* —Met. & Cheml. Engg., Aug.,1912; p. 467; 2000 w; 35c.

Chase, Thorington.—*The World's Greatest Smelter.* [Description of the Washoe plant, Montana].—Mex. Mg. Jnl., Dec., 1912; p. 30; 6000 w; 25c.

Denny, G. A.—*Discussion on Chilean Mills.*—Informes y Memorias del Instituto Mexicano de Minas y Metalurgia, Vol. 3, No. 1, 1912-1913, p. 25; 8000 w; 50 cts.

Empson, J. B.—*Discussion on Chilean Mills.*—Informes y Memorias del Instituto Mexicano de Minas y Metalurgia, Vol. 3, No. 1, 1912-1913, p. 41; 3000 w; 50 cts.

Grothe, A., and Salazars, L.—*La Industria Minera de México: Tomo I—Estados de Hidalgo y de México;* [The mining industry of Mexico: Vol. I—States of Hidalgo and Mexico].—Mexico City, 1912; 304 pp; $1.50.

Guillery, R.—*Etude sur les nouvelles méthodes d'essais mécaniques des métaux;* [New methods of testing metals].—Rev. de Mét'l'gie, June,1912; pp. 471-499; $1.15.

Guillet, L.—*Progrès des métallurgies autre que la sidérurgie et leur état actuel en France;* [Non-ferrous metallurgy in France; progress and present status; enlargement in book form of paper in Soc. d. Ingrs. Civ. France, Bull., Dec.-June, 1910-11; 1: copper, lead, silver; 2: zinc, tin, antimony, bismuth, nickel, cobalt; 3: aluminum, magnesium, mercury, gold; secondary metals].—Paris, 1912; 334 pp.; 32 figs.; $2.50; (book).

Hannover, H. J.—*Ueber die Herstellung poröser Metalle;* [Production of porous metals and alloys].—Centralbl. d. Hütten & Walzwerke, July5,1912; p. 349; 2500 w*; 35c.

Hannover, H. I.—*The Production of Porous Metals;* [Principle of eutectic alloys applied in producing accumulator plates and lead-antimony alloys; from "Ingenioren," June 15].—Met. & Cheml. Engg., Sept.,1912; p. 509; 1000 w*; 35c.

Hulet, J.—*Album général des produits métallurgiques francais; Barèmes généraux;* [General album of French metallurgic products; nomenclature, specifications and ready reckoners].—Paris, 1912; 544 pp.*; $2.50; (book).

Jacquier, G.—*A New Automatic Extraction Process;* [Catalytic force of aluminum, electric earth currents and ultra-violet sun rays used to precipitate metals from aqueous solutions].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 337; 2500 w; $1.

Jacquiet, G.—*Photolyse, A New Automatic Process for the Extraction of Metals;* [Precipitation on aluminum plates from warm water solutions].—S. Afr. Mng. Jnl., Sept.14, p. 45; 800 w*; 35c.

Juretzka, Franz.—*Die Herstellung der Zinkmuffel in Rheinland und Belgien;* [The manufacture of zinc muffles in Rheinland and Belgium].—Metall u. Erz, Nov.8,1912; p. 78; 4000 w*; 50 cts.

Juretzka, Franz.—*Verhüttung von Zinkerzen;* [The smelting of zinc ores].—Centralblatt der Hütten u. Walzwerke, Nov.15, 1912; p. 602; 3000 w; 25c.

Knudsen, E.—*La Fusion de los Minerales de Cobre; Procedimiento Knudsen;* [The smelting of copper ores; Knudsen process] (abstract of paper read before the Austrian Decennial Congress of Mining Engineers). —Revista Minera, Dec.1,1912; p. 559; 1000 w; 35c.

Kohlschütter, V. and A. Noll.—*Ueber feine Metallzerteilungen;* [The very fine division of metals, especially forms pro-

duced by cathodic pulverizing in dilute gases; tests with silver].—Zts. f. Elektrochemie, June1,1912; p. 419; 6000 w*; 45c.

Last, Frederick.—*Chemistry of the Anaconda Reduction Processes.* (Paper read before Int. Cong. Appl. Chem.; abstract).—E. & M. J., Nov.30,1912; p. 1036; 1500 w; 25c.

Michel-Rousset, J.—*La Coloration des Métaux;* [The art of metal coloring].—Paris, 1912; 284 pp.; $1.25; (book).

Nagel, O.—*Auslaugungsversuche;* [Experimental tests with form of tank, agitation, etc., in the leaching of ores].—Chemiker Ztg., July9,1912; p. 780; 1200 w*; 35c.

Navâez, Francisco.—*Discussion on Chilean Mills* (in Spanish).—Informes y Memorias del Instituto Mexicano de Minas y Metalurgia, Vol. 3, No. 1, 1912-1913, p. 11; 4400 w*; 50 cts.

Neumann, B.—*Das Metallhüttenwesen im Jahre* 1911; [Review of metallurgy in 1911: 1: Copper; 2: zinc, cadmium, tin, lead; 3: antimony, arsenic; bismuth, nickel, cobalt, platinum, mercury, silver, gold, alimunum].—Glückauf, Sept.21,1912; pp. 1529-1536; (2), Sept.28, pp. 1569-1579; (3), Oct.5, pp. 1613-1623; 95c.

Pancke, —. *Kurze Analysen Vorschriften, Zum Gebrauch in Metallhütten-Laboratorien;* [Short-cut analytic methods for use in metallurgic laboratories].—Halle; 1912; $1 (book).

Parry, L.—*Systematic Treatment of Metalliferous Wastes;* [Lead, tin, antimony, copper, nickel and zinc].—London, 1912; 121 pp; $2 (book).

Pohl, Rob., and P. Pringsheim.—*Production and Properties of Metallic Films;* [Optically plane metallic surfaces for instruments; from Deu. Physikal. Ges., Ber. f. 1912].—Engnrg., Sept.13,1912; p. 361; 1500 w; 35c.

Stadler, H.—*The New Metallurgy* [on the Rand]. Jnl. Chem., Met. & Mg. Soc., S. A.; abstract).—W. A. Mg., Bldg. & Eng. Jnl., Oct.5,1912; p. 12; 5000 w; 35c.

Strahl, G.—*Das Färben von Metallen;* [The coloration of metals].—Galvanoplastik, April,1912; p. 26; 1100 w; 35c.

Stockmeier, Dr.—*Fortschritte der chemischen Metallbearbeitung und verwandter Zweige im Jahre* 1911; [Review of progress in the chemical working of metals and allied branches in 1911; 1: Galvanizing and electroplating].—Chemiker Ztg., Oct.8, p. 1165; 2000 w; 35c.

Tombeck, D., and A. Jacquet.—*Eléments de Marchandises; Tome II: Métallurgie, Métaux;* [Elements of Merchandise; Vol. II: Metallurgy and the Metals; preparation, properties, uses, sales].—Paris, 1912; 252 pp.; 215 figs.; $1.50; (book).

Watson, R. B.—*Nipissing High-Grade Mill, Cobalt, Ont.*—E. & M. J., Dec.7,1912; p. 1077; 3500 w*; 25c.

Westling, E. H.—*Proposed Treatment of Sulphide Ores with Nitric Acid, or So-Called Rankin Process.*—Met. & Cheml. Engg., Nov.,1912; pp. 571-573; 2000 w; 35c. Abstract in Cheml. Met. & Mng. Soc of S. Afr., Jnl., April,1912; p. 423; 2000 w; 90c.

———. *Calcination de la Blenda;* [Calcination of blende].—Revista Minera, Nov. 16,1912, p. 534; 2300 w; 35 cts.

———. *Extraction du Mercure en Toscane;* [The recovery of mercury in Tuscany].—Bull. du Commerce, Oct.26,1912, p. 11 (reprinted from Moniteur Tecnico); 1000 w; Nov. 2, 550 words; 25 cts.

ASSAYING AND CHEMISTRY

Allen, W. S., and H. B. Bishop.—*An Exact Method for the Determination of Sulphur in Pyrites Ores.*—8th Internatnl. Congr. of Appl. Chem'y, 1912; Vol. 1, pp. 35-51.

Allen, I. C., and I. W. Robertson.—*Methods of Determining the Sulphur Content of Fuels, Especially Petroleum Products.*—U. S. Bur. of Mines, Technical Paper No. 26; 1912; 11 pp.; 20c.

Bahney, L. W.—*The Alundum Extraction-Thimble Used in the Determination of Copper.*—Amer. Inst. Mng. Engrs., Bull. 71, Nov.,1912; p. 1343; 500 w*; $1.15.
Abstract in Met. & Cheml. Engg., Nov., 1912; p. 737; 600 w*; 35c.

Balta, R. de Cela.—*Analysis y Ensayos Quimicos Industriales;* [Industrial analysis and chemical testing].—Madrid, 1912; 735 pp.; $6; (book).

Beyne, Edgar.—*Dosage du zinc dans les minerais ferrugineux;* [Estimation of zinc in ferruginous ores and concentrates].—Soc. Chimiq. Belgiq., Bull.; July,1912; p. 355; 2400 w; 65c.

Blair, A. A.—*The Chemical Analysis of Iron;* [Including ores, metals, slags, fluxes, fuels and furnace and producer gases].—Philadelphia, 1912; 7th edition; pp. —*; $4; (book).

Bleyer, B., and A. Moormann.—*Die Massanalytische Bestimmung des Berylliums;* [Quantitative estimation of beryllium].—Zts. f. analyt. Chemie, 1912, No. 6; pp. 360-367; 65c.

Breyer, F.—*The Ferrocyanide Titration of Zinc;* [Read to Internatnl. Congr. of Appl. Chem'y; abstract].—E. & M. J., Sept. 21,1912; p. 552; 500 w; 25c.

Brubaker, H. W.—*New Apparatus for Volumetric Determination of CO_2;* [In carbonates].—Jnl. of Ind'l & Engg. Chem'y, Aug.,1912; p. 599; 1300 w*; 65c.

Bürklein, A.—*Das neue Holzimprägnierungs-Verfahren; System Hasselmann;* [New experiments in the impregnation of wood, Hasselmann system].—Bergbau, Nov. 7,1912; p. 631; 3500 w; 50c.

Cameron, Frank K.—*Concentration of the Soil Solution.* (Paper read before Eighth Int. Cong. Appl. Chem.; abstract).—Am. Fert., Nov.16,1912; p. 39; 1500 w; 35c.

Chauvenet, R.—*Chemical Arithmetric and Calculation of Furnace Charges.*—Philadelphia, 1912; 302 pp; $4 (book).

Chesneau, G.—*Principes theoriques et pratiques d'analyse minérale;* [Theory and practice of the analysis of minerals and ores].—Paris, 1912; 641 pp; 99 figs; $7 (book).

Conradson.—*Tests of Lubricating Oils, Petroleum, etc.*—See Petroleum.

Coutagne, M.—*Sur la Fabrication Synthétique de l'Ammoniaque;* [On the synthetic manufacture of ammonia].—(From Revue des Produits Chemiques).—Journal du Four Electriq., Nov.15,1912, p. 488; 1300 w; 35 cts.

Cowles, R. K.—*Precipitation of Gold and Silver by Carbon.* (Proc. Aust. Inst. M. E.).—M. & S. P., Dec.7,1912; p. 730; 1800 w*; 20c.

Crispo, D.—*Dosage de l'étain dans le fer-blanc;* [Estimation of tin in white metal].—Etudiants Inst. Meurice, Bull. No. 1, 1912; pp. 150-152.

Davis, J. D.—*The Fuel Inspection Labor-*

atory of the Bureau of Mines.—U. S. Bur. Mines, Bull. 41; 1912; pp. 72-92*; 10c.

Demarest, D. I.—***A New Method for the Determination of Vanadium;*** [from Jnl. of Ind'l & Engg. Chem'y, April, 1912].—Mining & Engg. World, Aug.24,1912; p. 346; 500 w; 10c.

Dinslage, E.—*Analyse von Norgesalpeter, Kalkstickstoff und Stickstoffkalk;* [Chemical analyses of Norwegian calcium nitrate, and cyanamide].—Zentralbl. f. Kunstdünger Ind., Sept.21,1912; p. 311; 2500 w; 35c.

Doelter, C.—*Handbuch der Mineralchemie;* [Manual of Mineralogical Chemistry; Vol I, Carbons and Carbonates; Vol. II, Silica and Silicates].—Berlin, 1912; pp. 556, 434; $15 (book).

Döring, Th.—*Fortschritte auf dem Gebiete der Metallanalyse im Jahre,* 1911; [Progress in metal analysis in 1911; (1) copper, silver-gold, zinc; (2) mercury, aluminum, tin, lead, antimony, arsenic, bismuth, manganese; (3), iron, steels and ferros; nickel-cobalt; platinum metals].—Chemiker Ztg., June18,1912; p. 681; 2000 w; (2); June29, p. 738; 2000 w; (3): July4, p. 759; 4500 w; 65c.

Drawe, —. *Fluoranalysen;* [Analysis of fluorine].—Zts. f. angew. Chemie, July5, 1912; pp. 1371-1372; 50c.

Duisberg, Carl.—*The Latest Achievements and Problems of the Chemical Industry.* (Paper read before Eighth Int. Cong. Appl. Chem.; abstract).—Am. Fert., Nov. 16, 1912; p. 37; 1500 w; 25c.

Easton, H. L.—*Estimation of Sodium Peroxide.*—M. & S. P., July20,1912; p. 87; 750 w; 20c.

Ebler, E.—*Bestimmung des Rediums in Mineralien und Gesteinen;* [Estimation of radium in minerals and rocks].—Zts. f. Elektrochemie, July1,1912; p. 532; 1800 w*; 45c.

Ericson, E. J.—*A New Technical Method of Spelter Analysis.*—8th Internatnl. Congr. of Appl. Chem'y, Vol. 1; 1912; pp. 183-186.

Escales, R. (Editor). — *Industrielle Chemie;* [Manual of industrial Chemistry].—Stuttgart, 1912; pp. —; 21 figs.; $5.50; (book).

Fabien.—*Determination rapide du plomb contenu dans les scories;* [Rapid estimation of lead in slags].—Soc. Amicale de Douai, Bull., Oct.10, 1912; p. 657; 500 w; 35c.

Fairchild, J. G.—*The Accurate Volumetric Determination of Phosphoric Acid in Phosphate Rock.*—Jnl. of Ind'l & Engg. Chem'y, July,1912; p. 521; 2000 w; 65c.

Fairlie, A. M., and A. J. Bone.—***Copper Determination with Revolving Anodes;*** [Priority of discovery].—E. & M. J., Aug.31, 1912; p. 389; 500 w; 25c.

Fawns, S.—*Tin.*—See under Tin.

Ferry, —. *Verbesserter Apparat zur Stickstoffbestimmung;* [Improved apparatus for estimation of nitrogen].—Zts. f. analyt. Chemie, 1912, No. 6, p. 367; 100 w*; 65c.

Filitz, Fr.—*Praktischer Leitfaden für Zinkhütten-Laboratorien;* [Practical guide for zinc smelter laboratories].—Kattowitz, 1911; pp. —; 5 figs.; $3.50; (book).

Finch, G.—*Massanalytische Bestimmung der gebundenen Schwefelsäure;* [Quantitative analysis of combined sulphuric acid or sulphates].—Chemiker Ztg., July9,1912; p. 782; 2000 w; 35c.

Fischer, F. and E. Stecher.—*Schnellelektroanalyse unter vermindertem Druck;* [Rapid electro-analysis at reduced pressure; lead, nickel, zinc, copper in brass, copper-nickel and copper silver-separation]. Zts. f. Elektrochemie, Sept.15,1912; pp. 809-816*; 50c.

Forbes, E. B.—*Alundum Not Constant in Weight;* [Restrictions in use of alundum laboratory utensils].—Jnl. of Indl. & Engg. Chem'y, July,1912; p. 544; 750 w; 65c.

Frazer, J. C. W., and E. J. Hoffman.—*The Constituents of Coal Soluble in Phenol.*—U. S. Bur. Mines, Techn. Paper No. 5; 1912; 20 pp.; 10c.

French, H.—*Saving Time in the Laboratory.*—M. & S. P., Aug.17,1912; p. 208; 2000 w; 20c.

French, H.—*New Volumetric Methods in Vogue at Mints.*—Mining & Engg. World, Nov.9, p. 853; 3500 w; 10c.

Friedrich, K.—*Ueber ein Quarzglasquecksilber-Thermometer nach Dr. H. Beckmann zur Bestimmung geringer Antimongehalte in Blei-Antimonlegierungen;* [Beckmann quartz-glass mercurial thermometer for estimating small amounts of antimony in lead-antimony alloys].—Metallurgie, July 22,1912; p. 446; 1500 w*; 50c.

Fuchs, Wm. and P. Wagner.—*Zur Bestimmung der citronensäurelöslichen Phosphorsäure in Thomasmehlen;* [Determining the citrate-soluble phosphoric acid of Thomas basic phosphate].—Chemiker Ztg., Sept 12,1912; p. 1037; 2800 w; 35c.

Gale, H. S.—*Simple Field and Laboratory Tests for Potash;* [from U. S. Geol. Survey Bull. 530-A; 1911].—Mng. Sci., Aug. 1,1912; p. 70; 1200 w; 20c.

Gooch, F. A.—*Methods in Chemical Analysis.*—New York, 1912; 536 pp.; $4 (book).

Griffin, C. E.—***Chemical Estimation of Uranium and Vanadium.***—Mining & Engg. World, Aug.10,1912; p. 247; 2500 w; 10c.

Grünwald, J.—*Chemische Technologie der Email-Rohmaterialen;* [Chemical technology of the crude materials in the enamel industries].—Dresden, 1912; 282 pp.; $2 (book).

Guppy, P. L. and D. Waterman.—*Separation of Base Metals in Cyanide Solution for Quantitative Determination.*—M. & S. P., Nov.9, p. 597; 1000 w; 20c.

Gurwitsch, L.—*Zur Kenntnos des Adsorptionsvorganges bei den Erdölprodukten;* [Contribution to the knowledge of the adsorption reactions with petroleum products].—Petroleum, Oct.14,1912; p. 65; 2500 w; 60c.

Gurwitsch, —. *Chemie und Technologie des Erdöls;* [Chemistry of the petroleum hydrocarbons and their derivatives].—Zts. f. angew. Chemie., Sept.13, pp. 1897-1904; Sept.20, pp. —; 75c.

Gwiggner, A.—*Zur Teerbestimmung im Generatorgas;* [Tar estimation in producer gas].—Bitumen, Sept.1,1912; p. 257; 1200 w; 35c.

Hallett, R. L.—*Separation in the Iodide Method for Determining Copper.*—E. & M. J., July13,1912; p. 54; 400 w; 25c.

Handy.—*Sampling and Assaying Cobalt, Ontario, Ores.*—See Silver.

Hawley, F. G.—*Determining SO_3 in Flue Gas.*—E. & M. J., Nov.23,1912; p. 987; 2000 w; 25c.

Heczko, A.—*Zur Schwefelbestimmung in Pyriten;* [Estimation of sulphur in pyrite; —Zts. f. analyt. Chemie, 1912, No. 1; pp. 1-13; 65c.

von Hevesy, G.—*Radioaktive Methoden in der Elektrochemie;* [Radioactive methods in electroanalysis; read to Deu. Bunsen Ges.].—Zts. f. Elektrochemie, July1,1912; p. 546; 1000 w*; 45c.

Hooper, H. E.—*Estimation of Arsenic and Antimony;* [In speisses, slags, mattes and concentrates].—E. & M. J., Oct.12, p. 706; 2100 w; 25c.

Hullings, W. J.—*Water Supply for Laboratory Purposes;* [at Tennessee Copper Co. plant].—E. & M. J., Sept.14,1912; p. 496; 600 w*; 25c.

Huybrechts, M.—*Revue des travaux de chimie analytique minérale parus en* 1911; [Review of literature of analytic mineral chemistry published in 1912].—Soc. Chimiq. Belgiq., Bull.; Oct.,1912; pp. 435-463; 75c.

James, C., and T. O. Smith.—*The Quantitative Separation of Lanthanum from Yttrium.*—Amer. Chem. Soc., Jnl.; Sept., 1912; 3 pp.; 65c.

Johnston, A. Mc. A.—*Note on Dust Determination by Filtration Through Sugar.*—Chem. Met. & Mng. Soc. of S. Afr., Jnl; May,1912; p. 442; 500 w*; 90c.

Johnson, A. E.—*The Analyst's Laboratory Companion.*—London, 1912 (4th edition); 164 pp.; $2.25 (book).

Keller, Edw.—*The Solubility in Nitric Acid of Gold Contained in Certain Copper Alloys. — Copper Bullions.* — Amer. Inst. Mng. Engrs., Bull. 67, July,1912; pp. 681-695; $1.15.

Kirchhoff, A.—*Zur Analyse des Kalkstickstoffs;* [Analysis of calcium cyanamide].—Chemiker Ztg., Sept.17,1912; p. 1058; 500 w; 35c.

Klinkerfues, Fr.—*Fortschritte in der analytische Praxis der Kunstdüngerindustrie;* [Recent noteworthy advances in analytic practice in the fertilizer industries].—Zentralbl. d. Kunstdünger-Ind., July7,1912; p. 208; 3600 w; 35c.

Knecht, E. and Hibbert, E.—*New Reduction Methods in Volumetric Analysis.*—London, 1912; 108 pp.; $1.25 (book).

de Koninck, L. L., and Edm. von Winiwarter.—*Essais des minerais de zinc, séparation du fer par l'ammoniaque;* [Zinc ore analysis, separation of iron by ammonia].—Soc. Chimiq. Belgiq., Bull., May,1912; pp. 238-243; 2000 w; 50c.

Koss, M.—*Ein neues Reagen auf Thorium;* [New test for thorium accompanied by cerium and yttrium earths].—Chemiker Ztg., June18,1912; p. 686; 750 w; 35c.

Koukline, E. V.—*Quelques mots sur l'analyse du mineral de platine;* [Notes on the analysis of platinum ores].—Rev. de Métall'gie, Oct.,1912; pp. 815-824; $1.15.

Kroczek, Alois.—*Bindung des atmosphärischen Stickstoffes in Nature und Technik, II;* [Fixation of atmospheric nitrogen in nature and artificially].—Zent. Blatt. für die Kunstdünger-Industrie, Nov.,1912; p. 379; 3500 w; 50c.

Kruh, Dr. O.—*Chemistry and Electric Lighting.* (Paper read before the Elektrotechnische Verein in Vienna).—Elect. (London), Nov.,1912; p. 306; 2000 w; 35c.

Kullgren, K.—*Eine Methode zur Bestimmung schwefliger Säure in Luft;* [Estimation of sulphuric acid in air].—Berlin, 1912; 20 pp.*; 75c; (pamphlet).

Ladd, Emil.—*Rapid Method for the Analysis of Kaolin.*—Mining & Engg. World, June29,1912; p. 1350; 750 w; 10c.

Laist, Frederick.—*Chemistry of the Anaconda Reduction Processes.* (Paper read before Int. Cong. Appl. Chem.; abstract). —E. & M. J., Nov.30,1912; p. 1036; 1500 w; 25c.

Leefelder, H.—*Unsere Brennmaterialen; Ihre Untersuchung und Verbrennung;* [Fuels, their examination and combustion]. —Berlin, 1912; 81 pp.*; $1.

Liddell, D. M.—*Sampling and Assaying in* 1911.—Mineral Industry, Vol.20,1912; p. 885-899*.

Livingston, D. C.—*Fire Assay Charges;* [For various classes of gold and silver ores and metallurgic products].—M. & S. P., Oct. 12, p. 468; 1800 w; 20c.

Mahler, P., and Goutal, E.—*De l'Emploi de l'Oxygène sous Pression pour Doser le Carbone Total des Ferro-Alliages;* [The use of oxygen under pressure for regulating the total carbon of ferro-alloys].—Soc. Amicale Ecole Dounai, Bull., Sept. and Oct., 1912, p. 287; 1200 w; 35 cts.

Messell, Rudolph.—*Progress in Industrial Chemistry;* [Address delivered before Soc. of Chem. Ind.; abstract].—Chem. Eng., Nov.,1912; p. 171; 2000 w; 35c.

Metzger, F. J., and F. W. Zons.—*A Volumetric Method for the Determination of Thorium in the Presence of Other Rare Earths; The Analysis of Monazite Sand.*— Jnl. of Ind'l & Engg. Chem'y, July,1912; p. 493; 1800 w; 65c.

Meyer, R. J. and O. Hauser.—*Die Analyse der seltenen Erden und der Erdsäuren;* [Manual of chemical analysis of the rare earths and earthy acids; cerium, yttrium, zircon and thorium earths; titanium, niobium and tantalum acids]. — Stuttgart, 1912; 320 pp; 45 figs; $3.75 (book).

Milford, L. R.—*Recent Analyses of the Saratoga Mineral Waters;* and, *Determination of Lithium.*—Jnl. of Ind'l & Engg. Chem'y, Aug.,1912; p. 593; p. 595; 3500 w; 65c.

Miller, L. F.—*Spectrographic Analysis at the Colorado School of Mines.*—Mng. Sci., Oct.28, p. 261; 500 w*; 20c.

Moser, L.—*Die Titration von Kupfersalzen mit Titantrichlorid;* [Titration of copper salts with titanium trichloride].—Chemiker Ztg., Sept.28, p. 1126; 1000 w; 35c.

Mulert, O.—*Ueber die Thermochemie der Kieselsäure und der Silikate;* [Thermochemistry of silica and the silicates].—Zts. f. anorgan. Chemie, 1912, No. 2; pp. 198-240*; $1.15.

Müller, E., and O. Diefenthäler.—*Massanalytische Bestimmung der Vanadinsäure mit Ferrocyankalium;* [Quant. estimation of vanadic acid and vanadates by means of potassium ferrocyanide].—Zts. f. analyt. Chemie, 1912, No. 1; pp. 21-23; 1000 w; 65c.

Neubauer, H., and F. Lücker.—*Ueber die von Lorenz'sche Methode der Phosphorsäurebestimmung;* [Notes on the von Lorenz method of phosphoric acid estimation]. —Zts. f. analyt. Chemie, 1912, No. 3-4; pp. 161-174; 65c.

Nola, E. di and A. Germain.—*Determinazione volumetrica del nichel;* [A volumetric method for determination of nickel]. —Rassegna Mineraria, Oct.21, p. 217; 1000 w; 35c.

Nowicki, R.—*Kohlenoxyd Detektor;* [Carbon monoxide (white damp) detector].—Kohle & Erz, Dec.18,1911; p. 298; 500 w*; 35c. Also in Elektrochem. Zts., May,1912; p. 35; 500 w*; 35c.

Pancke, —. *Kurze Analysen Vorschriften. Zum Gebrauch in Metallhütten-Laboratorien;* [Short-cut analytic methods for use in metallurgic laboratories].—Halle; 1912; $1 (book).

Patrick, W. W. and G. C. Wilsnack.—*A New Volumetric Method for Tin.*—Jnl. of

Ind'l & Engg. Chem'y, Aug.,1912; p. 597; 2000 w; 65c.

Pettis, E. S.—*Zinc Dust Precipitation.*—M. & S. P., Aug.3,1912; p. 151; 700 w; 20c.

Platou, —. *Die Apparat von Franz Fischer zur elektrolytischen Schnellbestimmung von Kupfer mit der Netzelektrode;* [Franz Fischer apparatus for rapid electrolytic estimation of copper with the net-electrode; read to Polyteknisk Fören., Kristiania, March18,1912; very brief mention].—Chemiker Ztg., June8,1912; p. 649; 150 w; 30c.

Popp, M.—*Die lösliche Kieselsäure in Thomasmehlen und ihr Einfluss auf die Bestimmung der citronensäurelöslichen Phosphorsäure;* [Soluble silica in Thomas basic phosphate and its influence in estimating the citrate-soluble phosphate content].—Chemiker Ztg., Sept.24,1912; p. 1102; 600 w; 35c.

Popp, M.—*Eine zuverlässige Methode zur Bestimmung der citronensäurelöslichen Phosphorsäure in Thomasmehlen;* [Dependable method of estimating citrate-soluble phosphoric acid in Thomas phosphatic-slag fertilizers].—Chemiker Ztg., Aug.17,1912; p. 937; 1000 w; 35c.

Portevin, M. A.—*Sur la Méthode Chemique pour l'étude des Alliages;* [On the chemical method for the study of alloys].—Revue de Métallurgie, Nov.,1912; p. 884; 1500 w*; $1.15.

Probert, F. H.—*Copper Determination with Revolving Anodes;* [Equipment and practice at Ray Central Copper Co., Ariz.]—E. & M. J., Aug.17,1912; p. 315; 1000 w*; 25c.

Prost, E., and M. Ubaghs.—*De l'influence des carbonates métalliques pouvant exister dans les houilles sur le résultat du dosage des matières volatiles;* [Effect of metallic carbonates in coal on the estimation of volatile constituents].—Soc. Chimiq., Belgiq., Bull., May,1912; pp. 216-222; 2000 w; 50c.

Przibylla, C.—*Eine methode zur Bestimmung des Kalis durch Massanalyse;* [Quantitative estimation of potash].—Kali, Oct.1, p. 473; 2500 w; 45c.

Rice, E. W.—*Laboratory Preparation of Litmus Paper.*—Mining & Engg. World, July6,1912; p. 14; 500 w; 10c.

Richards, Theodore W.—*The Control of Temperature in the Operations of Analytical Chemistry.* (Paper read before Eighth Int. Cong. Appl. Chem.; abstract).—Jnl. Ind. & Eng. Chem., Dec.,1912; p. 910; 1200 w; 75c.

Rindell, A.—*Löslichkeitsbestimmungen in der Agrikulturchemie;* [Solubility determination in phosphates and other agricultural materials].—Zentralbl. f. Kunstdünger Ind., Sept.7,1912; p. 289; 3600 w; 35c.

Rogers, A., and A. B. Aubert.—*Industrial Chemistry.*—New York, 1912; 872 pp.*; $6; (book).

Rosenheim, A.—*Die quantitätive Bestimmung des Thoriums durch Natriumsubphosphat besonders im Monazitsande;* [Quantitative estimation of thorium with sodium subphosphate, especially in monazite sands].—Chemiker Ztg., July18,1912; p. 821; 1200 w; 35c.

Rosenheim, A.—*Die Konstitution der Metawolframate;* [Constitution of the metatungstates; reply to H. Copaux].—Zts. f. anorgan. Chemie, 1912, No. 2; pp. 141-144; $1.15.

Ruppin, E.—*Die hydrographisch-chemischen Methoden;* [Sampling and analysis of ocean waters].—Zts. f. anorgan. Chemie, Vol. 75, No. 1 ,1912; pp. 69-96*; $1.20.

Schaeffer, J. A.—*Colorimetric Determination of Iron in Lead and Its Oxides.*—Jnl. of Ind'l & Engg. Chem'y; Sept.,1912; p. 659; 800 w; 65c.

Schilling, H.—*Ueber die gravimetrische Bestimmung des Zinks;* [On the gravimetric determination of zinc].—Chemiker Ztg., Nov.16,1912; p. 1352; 700 w; 30c.

Schilling, H.—*Chrombestimmung in Zinn und Antimon enthaltenden Bronzen;* [Estimation of chromium in bronzes containing tin and antimony].—Chemiker Ztg., June 20,1912; p. 697; 400 w; 30c.

Schmitz, L.—*Die flüssigen Brennstoffe;* [Liquid fuels, their production, properties and examination].—Berlin, 1912; 175 pp.; 56 figs.; $2.25; (book).

Schmitz, B.—*Eine neue Methode zur titrimetrischen Kalibestimmung in Düngemitteln;* [New titration method for estimating potash in fertilizers].—Zentralbl. f. Kunstdünger Ind., Oct.7, p. 337; 1800 w; 35c.

Schoch, E. P., and D. J. Brown.—*Electroanalysis of Copper, Antimony, Bismuth and Tin with Acidified Chlorid Electrodes.*—8th Internatnl. Congr. of Appl. Chem'y, Vol. 21, pp. 81-91.

Smoot, A. M.—*Sulphur Determination in Pyrites;* [New electrochemical method].—E. & M. J., Aug.31,1912; p. 412; 4000 w; 25c.

Smout, A. J. G.—*Iodide Copper Assay.*—E. & M. J., Aug.31,1912; p. 390; 800 w; 25c.

Stansfield, E.—*The Determination of Moisture in Fuels.*—Canada Dept. Mines, Mines Branch, Rep. f. 1911; 1912; pp. 123-137.

Starck, G., and E. Thorin.—*Die quantitative Bestimmung des Fluors als Kalziumfluoride;* [Quantitative estimation of fluorine as calcium fluoride].—Zts. f. analyt. Chemie, 1912, No. 1; pp. 14-18; 65c.

Surr, G.—*Use of Alundum Filtering Crucible in the Laboratory.*—Mining & Engg. World, June29,1912; p. 1356; 1000 w; 10c.

Surr, G.—*A Simple and Apparently Reliable Test for Potash.*—Mining & Engg. World, Aug.17,1912; p. 288; 1500 w; 10c.

Terman, J. E.—*Flue-Gas Analysis for Beginners;* [Orsat apparatus].— Power, Sept.10,1912; p. 380; 1500 w*; 15c.

Thornton, W. M.—*Estimation of Titanium in the Presence of Iron.*—Amer. Jnl. of Sci., Aug.,1912; p. 214-218; 65c.

Treadwell, W. D.—*Ueber die elektroanalytische Bestimmung des Kupfers in Pyriten;* [Electroanalytic estimation of copper in pyrites].—Chemiker Ztg., Aug.24,1912; p. 961; 800 w; 35c.

Tremoureux, R. E.—*A Successful Treatment of Concentrates by Cyanidation.*—Mex. Mg. Jnl., Dec.,1912; p. 18; 1200 w; 25c.

Trenkner, —.*The Assay for Gold, Silver and Platinum;* [at the Berlin mint; translated by O. H. Hahn].—E. & M. J., June29, 1912; p. 1280; 1200 w; 25c.

Trnka, R.—*Zur Bestimmung des Kaliums als Kaliumplatinchlorid;* [Determination of potassium as potassium-platium chloride].—Zts. f. analyt. Chemie, 1912, No. 2, p. 103; 200 w; 65c.

Valeton, J. J. P.—*Ueber die Grundbegriffe der Phasenlehre und ihre Anwendung auf wasserhaltige Salze;* [Principles of the phase rule, and their bearing on hydrous salts; lecture before Leipzig Inst. f. Mineralogie & Petrogr.].—Kali, June1,1912; p. 258; 300 w; 45c.

Walker, E. W.—*Hints on Assaying of Tin.*—Mg. & Eng. Rev., Nov.5,1912; p. 71; 1200 w; 35c.

Walker, E. W.—*Hints on Assaying;* [1: Gold, silver].—Mng. & Engg. Rev., Oct., 1912; p. 17; 1800 w; 35c.

Watts, Oliver P.—*The Making of Magnesia Crucibles.*—Wis. Eng., Nov., 1912; p. 64; 1000 w; 30c.

Weisser, F.—*Aschenbestimmung in Steinkohlen;* [Ash estimation in coal].—Chemiker Ztg., July4,1912; p. 757; 3200 w; 35c.

Wenzel, O.—*Addressbuch und Warenverzeichnis der Chemischen Industrie des deutschen Reichs;* [Indexed Directory of the Chemical Industries of Germany; No. 12, 1912].—Berlin, 1912; pp. ——; $10 (book).

Wilke-Dörfurt, E.—*Ueber ein spektralanalytisches Verfahren zur Bestimmung kleiner Mengen Rubidium neben viel Kalium;* [Spectrometric estimation of small amounts of rubidium accompanying abundant potassium].—Zts. f. anorgan. Chemie, Vol. 75, No. 2, 1912; pp. 132-140*; $1.20.

Wilmoth, L. J.—*Assay of Graphite Crucibles.*—Mex. Mng. Jnl., Nov., p. 23; 1200 w; 25c.

Wysor, H.—*Analysis of Metallurgical and Engineering Materials; A Systematic Arrangement of Laboratory Methods.*—Easton, Pa;. 1912; 82 pp; $2 (book).

Asso. of Official Agric. Chemists.—*29th Annual Convention;* [Proceedings and reports].—Amer. Fertilizer, Sept.21,1912; p. 21; 5000 w; 25c.

———. *Chemistry for Mining Men.*—Sci. & Art of Mg., Nov.23,1912; p. 178; 1000 w; 25c.

———. *Coal Analysis.*—Jnl. of Gas Lightg., 1912, No. 2563; pp. 977-982*; 50c.

———. *Estimation of Lead in Smelter Gases.*—Mng. Mag., Aug.,1912; p. 147; 1200 w; 45c.

———. *Le Diamant Artificial;* [The artificial diamond].—Revue Industrielle, Nov. 23,1912, p. 15; 800 w; 25 cts.

———. *Methods of Analysis Used in the Laboratories of Armour Institute of Technology;* [Idiometry and iodide assay of copper].—Chemi. Engr., June,1912; p. 253; 1500 w; 35c.

———. *Methods of Analysis Used in the Laboratories of Armour Institute of Technology;* IV: Determination of Zinc in Ores.—Chemi. Engr., Aug.,1912; p. 55; 1800 w; 35c.

———. *Micrographical Studies;* [Includes rapid estimation of arsenic in red copper].—Internatnl. Asso. f. Testing Materials Proc., Vol. 8, No. 2; 1912; pp. 11*; 60c.

———. *The Determination of Phosphorus or Phosphoric Anhydride;* [Armour Inst. methods.]—Chemi. Engr., Sept.,1912; p. 119; 1500 w; 35c.

Sampling

Bauer, O. and E. Deiss.—*Probenahme und Analyse von Eisen und Stahl;* [Sampling and analysis of iron and steel].—Berlin, 1912; pp. —; (book).

Binder, O. — *Mechanical Sampling of Ores;* [Discusses Pipe, Snyder, Vezin, Bridgemann, Hopkins and other samplers].—Mines & Minerals, July,1912; p. 735; 2200 w*; 35c.

Blyth, W. B.—*The Preparation of Mine Samples for Assay.*—W. Australia Chamber of Mines, Jnl.; July31,1912; p. 155; 3600 w; 75c.

Danforth, C. W.—*Methods of Sampling Steel Billets.*—Iron Age, Aug.15,1912; p. 346; 2000 w*; 30c.

Denny, O.—*Ore Valuation;* [Rand methods and liability to over-valuation].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 45; 4000 w*; $1.

Dewey, F. P.—*The Sampling of Gold Bullion.*—Amer. Inst. Mng. Engrs., Bull. 70, Oct.,1912; pp. 1075-1102; $1.15.

Dick, J. E.—*Churn-Drill Examination of Placers.*—See under Prospecting.

Gray, T. T.—*Grinding Samples for Assay.*—E. & M. J., Sept.21,1912; p. 534; 300 w; 25c.

Griffin, N.—*A Method of Sampling Hard Ground.*—Chemi. Met. & Mng. Soc. of S. Afr., Jnl.; Sept.,1912; p. 83; 500 w*; 95c.

Hallett, R. L.—*The Iodide Copper Assay.*—E. & M. J., Sept.28,1912; p. 580; 750 w; 25c.

Handy.—*Sampling and Assaying Cobalt, Ontario, Ores.*—See Silver.

Herron, J. H.—*Samples of Steel for Analysis;* [Drilling and milling methods].—Iron Age, Aug.22,1912; p. 403; 500 w*; 30c.

Howard, L. O.—*Murray Mill of the Utah Ore Sampling Co.*—Salt Lake Mng. Rev., Oct.30, p. 15; 1800 w*; 25c.

Laschinger, E. J.—*New Apparatus for Sampling Air for Dust.*—Chemi. Met. & Mng. Soc. of S. Afr., Jnl; May,1912; p. 443; 2200 w*; 90c. Also in S. Afr. Mng. Jnl., June29, p. 653; 2000 w; 35c.

Liddell, D. M.—*Sampling and Assaying in* 1911.—Mineral Industry, Vol. 20, 1912; p. 885-899*.

Munroe, H. S.—*Mine Sampling and Valuation;* [Read to Mng. & Met'g'l Soc. of Amer., N. Y. section, May16,1912; abstract].—E. & M. J., June29,1912; p. 1276; 1500 w; 25c. Also in M. & S. P., July6, p. 18; 1000 w; 20c.

Neumann, Dr.—*Ueber das Probenehmen;* [Sampling at smelters; discusses work of Schäfer and Corleis].—Chemiker Ztg., June 13,1912; p. 671; 1000 w; 35c.

Overstrom, G. A.—*Improved Teeter-Box Sampler;* [For tailing in Missouri lead district.]—E. & M. J. I., Aug.17,1912; p. 303; 600 w*; 25c.

Pelton, E. F.—*A System of Mine Sampling.*—E. & M. J., Aug.31,1912; p. 403; 2600 w; 25c.

Scott, C. E.—*Commercial Sampling of Coal.*—Mines & Minerals, Nov., p. 199; 3000 w; 35c.

Sheridan, L. M.—*Sheridan Oscillating Ore Sampler;* [U. S. Pat. No. 1,031,385].—E. & M. J., Nov.16, p. 932; 150 w*; 25c.

Smoot, A. M.—*The Mathematics of Copper Sampling.*—E. & M. J., June22,1912; p. 1213; 1200 w; 25c.

Sperry, Edwin A.—*Investigation of Feather River Black Sands;* [near Marysville, Cal.].—M. & S. P., Nov.16, p. 624; 2800 w*; 20c.

Sugiura, K. and P. A. Kober.—*Iodometric Copper Titrations;* [Abstract from Amer. Chemi. Soc., Jnl.].—Chemi. Engr., Sept., 1912; p. 123; 1000 w; 35c.

White, E. E.—*Surveying and Sampling Diamond-Drill Holes;* [in Lake Superior copper country].—Amer. Inst. Mng. Engrs., Bull. 71; Nov.,1912; pp. 1277-1298*; $1.15.

Wiard, Edw. S.—*Some Problems of Ore*

Concentration; [1; Sampling; Pulp screening].—Mng. Sci., Sept.26,1912; p. 196; 2500 w; 20c.

———. *Sampling at the Miami Copper Mine.*—E. & M. J., Sept.21,1912; p. 540; 300 w; 25c.

———. *Sampling of Ore;* [Range between actual and estimated contents].—E. & M. J., July,1912; p. 159; 500 w; 25c.

———. *Taking Samples from Drill Holes.*—E. & M. J., July13,1912; p. 61; 750 w; 25c.

CYANIDING; AMALGAMATION

See under Mill and Milling.

HYGIENE AND SAFETY

See "Sanitation, etc.," under Mine and Mining.

POWER AND MACHINERY.*

CHAPTER XVI.

MISCELLANEOUS AND GENERAL

Archbutt, L., and R. M. Deeley.—*Lubrication and Lubricants.*—London, 1912 (3d edition); 336 pp; $7.50 (book).

Barth, O.—*Die Wahl einer Betriebskraft;* [Factors in deciding the choice and style of power and power plant].—Ver. Deu. Ingr., Zts.; Oct.5, pp. 1610-1615*; Oct.12, pp. 1650-1655*; Oct.19, pp. —; $1.75.

Christian, L. A.—*Lubrication of Mining Machinery;* [Read to W. Va. Coal Mng. Inst.].—Coal & Coke Op., June27,1912; p. 401; 5000 w; 25c. Also in Coal Trade Bull., July15, p. 50; 5000 w; 25c.

Christensen, C. C.—*Sectionalized Machinery for Inaccessible Regions.*—Mining & Engg. World, Sept.14,1912; p. 481; 1200 w*; 10c.

Ciamician, G.—*Photochemistry and Conservation of Solar Energy;* [Read to International Congr. of Appl. Chem'y; abstract].—Met. & Chemi. Engg., Sept.12, 1912; p. 642; 4000 w; 35c.

Connley, A.—*Construction of Machinery Foundations.*—Iron Age, July4,1912; p. 1; 3000 w*; 30c.

Dobbs, F. E.—*Tests of Lubricating Oils.*—Practl. Engr., July15,1912; p. 707; 2000 w*; 25c.

Hammond, E. K.—*Safeguards for Power Plant Equipment.*—Power, June18,1912; p. 864; 1500 w*; 15c.

Lunt, H. F.—*Foundations for Prospecting Machinery.*—E. & M. J., Nov.16, p. 927; 700 w*; 25c.

Müller, W.—*Dampfmaschine, Dieselmotor, Elektromotor;* [Comparative costs of steam, Diesel-motor and electric drive].—Ton-Industrie Ztg., July2, p. 1055; 2000 w; 25c.

Shaw, H. S. Hele.—*Sources of Energy Available for Power;* [Presidential address Assn. of Engrs.-in-Charge].—Electrician, Oct.25, p. 90; 4000 w; 35c. Also in El. Rev. (London), Oct.25, p. 647; 1800 w; 35c.

Singer, L.—*Ueber die Schmierung von Maschinenteilen;* [Theory of lubrication of machine parts; with review of lubricating devices].—Petroleum, Sept.4, pp. 1307-1320; 5000 w*; 45c.

Ubbelohde, L.—*Die Theorie der Reibung geschmierter Maschinenteile;* [The theory of friction of lubricated machine parts; from "Petroleum"].—Allgm. Oestr. Chemkr. Ztg., Sept.1,1912; p. 129; 2100 w*; 45c.

Ward, C. E.—*Lubrication.*—Coal Mng. Inst. of America, Proc. for 1911; 1912; pp. 161-167.

Waterman, D.—*Determining the Pitch of Gears.*—M. & S. P., Sept.14,1912; p. 340; 1200 w*; 20c.

Wolff, Th.—*Wärme und Maschine in der Montanindustrie;* [Heat efficiency and machinery in mining].—Bergbau, June20,1912; p. 352; June27, p. 362; 4000 w; 35c.

"Practicus."—*Driving Belts; Their Troubles and Treatment.*—Mechl. World, Oct.4, 1912; p. 160; 2000 w; 35c.

———. *Machine for Testing Lubricants.*—Engnrg., June28,1912; p. 871; 2500 w*; 35c.

———. *Machinery Used on Transvaal's Base Metal Mines in* 1911.—S. Afr. Mng. Jnl., Oct.5, p. 146; 1400 w; 35c.

———. *What the South African Mines Buy.*—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 346; 2000 w; tables; $1.

*Note.—For drills, pumps, fans, haulage and winding engines, dredges, excavators, crushers, separators, conveyors, transportation machinery, etc., see respectively "Drilling and Boring," "Drainage," "Ventilation" and other appropriate headings in "Mine and Mining," "Mill and Milling," and "Miscellaneous."

ELECTRICITY IN MINE, MILL, ETC.

See also Electrometallurgy.

Aikens, W.—*Electric Power at Cripple Creek Mines and Mills, Colo.*—Mining & Engg. World, Sept.21,1912; p. 521; 1200 w*; 10c.

Aikens, W.—*Electric Power for Utah and Idaho Mines;* [Describes various power plants].—Mining & Engg. World, Oct.12, p. 657; Oct.19, p. 703; 7000 w*; 20c.

Aikens, W.—*Electric Power at Colorado Mines, Mills and Smelters.*—Mining & Engg. World, Sept.14,1912; p. 475; 3300 w*; 10c.

Arnold, H. W.—*Transportation in Modern Industrial Plants;* [Storage battery motors].—Mining & Engg. World, Aug.17, 1912; p. 294; 500 w*; 10c. Also in Salt Lake Mng. Rev., Aug.30, p. 18; 500 w*; 25c.

Askew, J.—*Three-Phase Hoists at Bantjes Con. Mines, Transvaal;* [Paper read before Inst. Mg. & Met.; abstract].—Mg. & Eng. World, Nov.30,1912; p. 993; 3000 w*; 10c.

Barnes, H. B.—*Results of Storage Battery Haulage at Idaho Springs, Colo.*—Mng. Sci., Aug. 17; p. 100; 2500 w*; 20c.

Barr, John Allen.—*Florida Phosphate Practice.*—M. & M., Dec.,1912; p. 265; 5000 w*; 35c.

Bartel, —. *Die Verwendung geringwertiger Brennstoffe zur einheitlichen Versorgung Deutschlands mit elektrischer Energie;* [Use of low-grade fuels, coal, lignite, and peat, for producing electric power in Germany; costs per kw.-hour].—E. T. Z., July11,1912; pp. 705-709*; 50c.

Bercovitz, D.—*Continental Systems of Charging for Current by Contract;* [Translated from E. T. Z.].—Electrician, Aug.9, 1912; p. 730; 2000 w; 35c.

Böhm, A.—*Förderbetrieb mit führerlosen Akkumulatoren Lokomotiven;* [Mine haulage with driverless accumulator locomotives at Von Der Heydt colliery, Prussia].—Kali

Erz & Kohle, Sept.25,1912; p. 955; 1800 w*; 35c.

Bowen, D. and W. E. French.—*Safety Devices in Connection with Electrical Machinery and Apparatus for Coal Mines;* [Read to Instn. of Mng. Engrs., London, June,1912].—Coll'y Guardn., June7,1912; p. 1136; June 14, p. —; 7500 w*; 50c. Also in Iron & Coal Trades Rev., June7, p. 912; June14, p. —; 7500 w*; 50c.

Branson, W. J.—*Single-Phase Induction Motors.*—Amer. Inst. Electr. Engrs., Proc.; July,1912; pp. 1525-1564*; $1.15.

Brown, A. W.—*Electrically-Driven Winding Engines in South Africa;* [Read to N. of England Inst. of Mng. etc. Engrs.].—Iron & Coal Trades Rev., Oct.13,1912; p. 632; Oct.25, p. —; 5000 w; 50c.

Brunelli, I.—*La costruzione delle linee elettriche aeree;* [Construction of aerial electric transmission lines].—Rome, 1912; 326 pp; $2.50 (book).

Burnett, F. C. E.—*Electricity in the Portland Cement Industry;* [Motors, wiring, equipment and installation in limestone quarries, skip-hoists, grinding mills, etc.]. —Amer. Inst. of El. Engrs., Proc., Sept., 1912; pp. 1817-1836*; $1.15.

Burns, E. E.—*The Electric Motor and Its Practical Operation.*—London. 1912; $2.50 (book).

Campbell, C. W. R., and others.—*The Design and Installation of Transformers from an Operating Point of View;* [from S. Afr. Inst. of El. Engrs., Jnl.].—Electrician, Aug.16,1912; p. 792; 6000 w; 35c. Also in S. Afr. Mng. Jnl., June22,1912; p. 629; 4000 w; 35c.

Carter, T. Lane.—*Electricity in Mining;* [General review of various applications].—Pract'l El'y & Eng., July,1912; p. 586; 2700 w; 25c.

Charlton, T.—*Notes on Shaft Signalling with Special Reference to the Nodon Rectifier;* [Read to Asso. of Mng. Electr. Engrs,. Yorkshire branch].—Iron & Coal Trades Rev., Nov.8, p. 750; 2800 w*; 35c.

Clamer, G. H.—*Electric Melting of Copper and Brass.*—Am. Inst. of Metals paper; 2 p.; 20c.

Clamer, G. H., and Hering, Carl.—*The Electric Furnace for Brass Melting.*—Am. Inst. of Metals paper; 16 p.; 20c.

Clark, H. H.—*The Factor of Safety in Mine Electrical Installations.*—U. S. Bur. Mines, Technical Paper No. 19; 1912; 14 pp; 20c.

Clemens, E.—*Remedies for Electrical Troubles.*—Coal Age, Dec.7,1912; p. 793; 3000 w*; 20c.

Coey, S. C.—*The Use of Electric Power in Steel Mills;* [Read to Amer. Iron & Steel Inst.].—Iron Age, Oct.31, p. 1039; 6000 w; 30c.

Cole, E. L.—*Design of Mine Trolley Lines.* —Coal Age, June29,1912; p. 1239; 2500 w*; 20c.

Cole, E. L.—*The Mine Telephone of Today.*—Coal Age, July27,1912; p. 107; 2400 w*; 20c.

Cook, A. L.—*Inspecting and Testing Electrical Apparatus.*—Power, Aug.13,1912; p. 186; Aug. 20, p. 220; 8000 w*; 25c.

Corlett. G. S.—*Notes on Plans and Log Books as Defined in the Electricity Rules;* [Read to Asso. of Mng. El. Engrs., Lancs. branch].—Iron & Coal Trades Rev., June 28,1912; p. 1041; 2000 w; 35c.

Courthope, T. F.—*A Modern Power Plant;* [Turbine generators and power distribution at Acadia Coal Co., N. S.].—Canadian Mng. Jnl., Sept.15,1912; p. 613; 3000 w*; 35c.

Creedy, F.—*The Turbo-Converter; A High-Speed Direct-Current Generating Unit;* [Read to Instn. of Electr. Engrs.].—El. Rev. (London), Nov.8, p. 765; 3000 w; 35c. Also in Electrician, Nov.8, p. 170; 3500 w*; 35c.

Czermak, A.—*Ueber die Wirtschaftlichkeit der diversen Grubenlokomotivförderungen mit besonderer Berücksichtigung des Ostrau-Karwiner Revieres;* [Efficiency comparison of combustion, compressed-air and electric haulage engines, especially in the Ostrau-Karwin coal field, Austria].—Montanist. Rundschau, June16,1912; pp. 589-594*; July 1, pp. 638-692*; 75c.

Dorgeloh, G. H.—*Liquid Rheostat for Mine Hoists.*—Gen. Electric Rev., May, 1912; 4 pp.*; 50c.

Du Pasquier, A. E.—*Electric Winding Engines;* [Paper read before So. Wales Inst. Eng.; abstract].—Elect. (London), Nov.15,1912; p. 212; 2000 w*; 30c.

Edwards, G. E.—*Direct Current Machines; Installation and Operation.*—Mining & Engg. World, July27,1912; p. 141; 4200 w*; 10c.

Eilert, —. *Der Kraftverbrauch von elektrischen und hydraulischen Hebezeugen;* [Power consumption of electric vs. hydraulic hoists].—Ver. Deu. Ingr., Zts.; July6, 1912; pp. 1061-1068*; 75c.

Elliott, A. F.—*Electric Mine Locomotive Operation.*—E. & M. J., July13,1912; p. 55; 2500 w; 25c.

Ellis, M. I. Williams.—*A New type of Induction Motor;* ["Cascade" single and multi-speed motor].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 235; 7000 w*; $1.

Field, A. B.—*Operating Characteristics of Large Turbo-Generators.*—Amer. Inst. Electr. Engrs., Proc.; June,1912; pp. 963-974*; $1.15.

Foster, W.—*Leakage Currents and Leakage Indicators;* [Read to Asso. of Mng. Electr. Engrs., W. of Scotl. branch].—Iron & Coal Trades Rev., June14,1912; p. 960; 2500 w*; 35c.

Gercke, M.—*Die neuere Entwickelung der Dampfturbine und des Dieselmotors in ihrer wirtschaftlichen Bedeutung für die Elektrizitätswerke;* [The newer developments in the steam turbine and Diesel motor in their economic bearing on electric power production].—Technik & Wirtschaft, Aug.,1912; pp. 526-536*; 75c.

Gercke.—*Die neuere Entwickelung der Dampfturbine und des Dieselmotors in ihrer wirtschaftlichen Bedeutung für die Elektrizitätswerke;* [Newer development of the steam turbine and the Diesel motor and their influence on the electric power plant]. —Technik & Wirtschaft, Aug.,1912; pp. 526-536*; 75c.

Gillespie, J.—*A Method of Repairing Unarmoured Cables in Wet Shafts;* [Read to Asso. of Mng. El. Engrs.].—Iron & Coal Trades Rev., Oct.18, p. 628; 1200 w*; 35c.

Gilser, H. S.—*Brakpan Mines, Ltd., Electrically Operated Cyanide Mill.*—Mines & Minerals, Oct.,1912; p. 156; 2100 w*; 35c.

Gold, K.—*Elektrische Ueberlandzentralen und ihre Bedeutung für die Verwertung minderwertiger Braunkohlenflöze;* [Long distance electric transmission, and use of low-grade coals; costs of representative plant; read to Allgm. Bergmannstag, Vienna, 1912; abstract].—Montanist. Rundschau, Sept.15,1912; p. 948; 800 w; 50c.

Götz, O.—*Hauptschacht.-Fördermaschinen*

mit Drehstrom-Kollektormotoren; [Shaft hoisting with alternating-current collector motors].—Kali, Sept.1,1912; pp. 409-415*; 45c.

Gradenwitz, A.—*German Electric Mine Locomotives.*—E. & M. J., Oct.5,1912; p. 647; 2000 w*; 25c.

Greenhalgh, J.—*Design of High-Tension Electric Power Transmission Lines.*—Engg. Mag., Oct.,1912; pp. 49-56*; 35c.

Grimshaw, Robert. — *Kohlengewinnung mittels elektrisher Stossmachinen;* [Coal mining by means of electrical puncher machines]. — Technischer Centralanzeiger (Kohle u. Erz), Nov.11-18,1912; 3500 w*; 50c.

Gunsolus, F. H.—*Notes on Shotfiring by Electricity.*—Coal Age, Dec.7,1912; p. 737; 2500 w; 20c.

d'Haenens, —. *Centrale Electrique à St. Vaast;* [New electric central power station at St. Vaast Mine No. 10, La Louvière colliery, Belgium].—Annales d. Mines, Belgiq.; Vol. 17, No. 3; 1912; p. 654; 6000 w*; 90c.

Haller, —. *Elektrisch angetriebene Aufschiebevorrichtung für Forderkörbe;* [Electrically operated mine-car discharge at shaft and tipple stations].—Glückauf, Aug. 24,1912; p. 1379; 500 w*; 50c.

Hamilton, G. W.—*Gathering by Electric Mine Locomotives.*—Coal & Coke Op., Dec. 5,1912; p. 356; 2500 w; 20c.

Hamilton, G. W.—*An Electric Haulage System.*—Coal & Coke Op., Nov.21,1912; p. 323; 2000 w; 20c.

Hamilton, G. W.—*Preliminary Considerations for the Construction of an Electric Haulage System for Mines.*—Mex. Mng. Jnl., Nov., p. 41; 2000 w*; 25c.

Hamilton, G. W.—*Operating Features of Mine Locomotives.*—Electric Jnl., No. 4, Vol. 9; pp. 345-351*; 50c.

Hawes, A. L.—*Electric-Crane Control Gear.*—Engg. Rev., Sept.,1912; p. 100; 3000 w*; 35c.

Henke, —. *Signal- und Schaltanlage für elektrische Grubenbahnen mit Fahrdraht unter Tag;* [Signalling and switching arrangement for electric mine railways].—E. T. Z., Aug.22, pp. 870-871*; 50c.

Herberts, H.—*Der Elektromotor im Vergleich zur Pressluftmaschine zum Antrieb von Schacht-Fördermaschinen;* [Electric motor vs. compressed-air drive of mine hoists; critical review of Pauly's paper before Amer. Inst. Mng. Engrs.].—Fördertechnik, Sept.,1912; p. 195; 7500 w*; 50c.

Heym, W.—*Die Anwendungen von Elektrizität in Grubenbetrieben;* [Applications of electricity in mining].—Halle, 1912; 76 pp.; $1 (book).

Highfield, J. S.—*The Transmission of Electrical Energy by Direct Current on the Series System;* [Read to Instn. of Electr. Engrs., Glasgow, June12,1912].—Engnrg., June14, p. 819; 6500 w*; 35c. Also in Electrician, June14, p. 393; 6500 w*; 35c. Also in El. Rev. (London), June14, p. 985; June21, p. —; 6500 w*; 50c.

Hobart, H. M., and E. Knowlton.—*The Squirrel-Cage Induction Generator.*—Amer. Inst. Electr. Engrs., Proc.; June,1912; pp. 1045-1072*; $1.15.

Hoefer, —. *Elektrische Kraftanlagen auf Berg- und Hüttenwerken in Rheinland-Westfalen;* [Electric power plants at mining and smelting works in Rhine-Westphalia. Belgium, North France and England].—Ver. Deu. Ingr., Zts.; Aug.10,1912; pp. 1281-1291*; 75c.

Holder, Chas. A.—*Electrolytic Extraction of Copper Ore in Norway.* (U. S. Consular report; abstract).—Mg. & Eng. World, Dec. 14,1912; p. 1088; 260 w; 10c.

Hutchinson, F. W.—*Apparatus for Electric Signaling on a 3-mile Plane, with Precautions for Installation in Gassy Mines.*—Sci. & Art of Mng., July6,1912; p. 576; 500 w*; 35c.

Jackson, Henry D.—*Rates for Electricity.*—Eng. Mag., Dec.,1912; p. 326; 5000 w*; 35c.

Jackson, H. D.—*Cost of Power in Central Stations.*—Power, Nov.12, p. 701; 2500 w*; 15c.

Janzen, —. *Fördermaschinen mit Antrieb durch Drehstromkommutatoren;* [Motors and control for hoisting systems operating under alternating current, with installations at Helmstedt and Braubauch].—Elektr. Kraftbetr. & Bahnen, Aug.4,1912; pp. 469-476*; Aug.14, pp. 481-489*; 75c.

Jennings, J. T.—*Electricity Applied to Coal Mining.*—Coal Age, Dec.7,1912; p. 779; 2000 w; 20c.

Johnson, C. L.—*Aluminum Transmission Lines;* [British practice; abstract from El. World].—Engg. Mag., Sept.,1912; p. 924; 1600 w; 35c.

Kershaw, John B. C.—*Electric Furnace Methods of Steel Production.*—Ir. Tr. Rev., Nov.21and28, Dec.5, 1912; 1300 w*; 75c.

King, Campbell.—*The Electrification of a Group of Small Collieries.* (Paper read before West of Scotland Br. Assn. Mg. Elec. Eng.).—Ir. & C. Tr. Rev., Nov.29, 1912; p. 861; 750 w; 35c.

Kneeshaw, F. P.—*Notes on Accumulator Practice;* [Read to Electr. Asso. of N. S. W.].—Mng. & Engg. Rev., July,1912; p. 334; 3000 w; 45c.

König. — *Transportable Elektromotoren;* [Portable electric motors, applications and costs of several types].—Elektro. Anzgr., Aug.4,1912; p. 791-793; Aug.11, pp. 817-818*; 75c.

König, —. *Elektromotoren zum Betriebe von Abteufpumpen nebst Schaltapparaten;* [Electro-motors and switching attachments in sinking pumps, and their operation].—Elektrot. Anzgr., May23,1912; 3 pp*; 50c.

Kraus, Fr.—*Ueber die Berechnung der Gleichstrom-Elektromagnete;* [Computations for direct-current electromagnets].—Elektrotechnik & Masch. Bau., Oct.20, p. 869-875*; 4800 w*; 35c.

Kruh, Dr. O.—*Chemistry and Electric Lighting.* (Paper read before the Elektrotechnische Verein in Vienna).—Elect. (London), Nov.,1912; p. 306; 2000 w; 35c.

Lauffler, C. A.—*Electrical Injuries; Their Causation, Prevention and Treatment.*—New York, 1912; 77 pp; 50c (book).

Ledouble.—*Transport souterrain par locomotives électriques à accumulateurs;* [Underground haulage with storage-battery locomotives at Chaumonceau collieries, Belgium].—Annales d. Mines (Belgiq.), Vol. 17, No. 4, 1912; p. 1097; 1000 w*; 65c.

Leonarz, A.—*The Use of Discarded Hoisting Ropes as a Return for Electric Circuits;* [Read to Panther Valley Mng. Inst.].—Coal Age, Nov.16, p. 682; 1500 w*; 20c.

Letcher, O.—*South African Power Supply Projects;* [Discusses development of Victoria Falls & Transv. Power Co.].—E. & M. J., June22,1912; p. 1235; 2400 w; 25c.

Linebaugh, J. J.—*A 2400-Volt Direct-Current Electric Railway at Butte, Mont.*—General El. Rev., Aug.,1912; p. —; 3000 w*; 50c. Abstract in E. & M. J., July6,

p. 26; 1100 w; 25c. Also in Engg. News, Aug.15, p. 299; 600 w; 20c.

Lisse, —. *Elektrische Anlagen in Schlagwettergruben;* [Electric equipments in fiery mines; read to Allgm. Bergmannstag, Vienna, 1912; abstract].—Montanist. Rundschau, Sept.15,1912; p. 963; 1000 w; 50c.

Lof, E. A.—*Electric Mining Applications;* [Hoisting, haulage, pumping, compressors, drills and coal cutters, ventilators, breakers and tipples, dredges, telephones, lighting].—Columbia School of Mines Quar'ly, July,1912; pp. 317-339*; 65c.

Lyford, O. S., and R. W. Stovel.—*Steam Power Plants;* [Cost factors for steam turbo-electric generating plant].—Coal Mng. Inst. of Amer., Proc. for 1911; 1912; pp. 231-250.

Marchand, —. *L'électricité dans les travaux d'excavation;* [Electricity in tunnel driving; compressors, hoists, pumps, concrete mixers, locomotives, etc.].—Industrie Electriq., Sept.25, pp. 413-418*; 45c.

Marchand, H.—*L'électricité dans les mines;* [Electricity in mining; locomotives, fans, compressors, drills, telephones, signalling].—Electricien, Vol. 43, 1912, pp. 353-356*; 378-382*; 75c.

Marks, J. B., and Alley, Gerald.—*The Colorado Fuel & Iron Co.'s Rockville Mine.*—Coal Age, Nov.30,1912; p. 744 2500 w*; 20c.

Marshall, A. H.—*Electric Mining Locomotives.*—Electr. Engr., Vol. 8, 1912; No. 23, Suppl., pp. 33-37*; 50c.

MacGahan, P.—*Induction-Type Indicating Instruments.*—Amer. Inst. Electr. Engrs., Proc.; June,1912; pp. 1203-1216*; $1.15.

McMahon, S.—*The Wireless Motor in Mining;* [Storage battery].—Coal Age, Nov. 16, p. 671; 600 w; 20c.

McCluskey, H.—*Electric vs. Compressed Air Haulage and Pumping in Mines;* [Experiences on Pittsburgh seam].—Coal Age, Sept.7,1912; p. 333; 600 w; 20c.

McGlew, A. C.—*The Electrical Plant of the Golden Horse-Shoe Estates Co., Ltd.;* [3 steam turbines direct coupled to 3-phase alternators at 3000 rpm.].—W. Australia Chamber of Mines, Monthly Jnl.; April 30,1912; p. 62-69; 3000 w*; 75c.

McNeill, F.—*Alternating-Current Motors; Their Applicability and Care.*—El. Rev. (Chicago), Aug.31,1912; p. 403; 1300 w; 25c.

McTigue, Edward J.—*Protection of Mining Machine Cables and Men Handling Them.*—Coal Age, Dec.7,1912; p. 799; 250 w; 20c.

Meade, N. G.—*Rotary Converters and Their Operation.*—Power, June25,1912; p. 900; July2, p. 12; 3600 w*; 20c.

Means, C. M.—*Individual as Compared with Central Station Power Plants.*—Coal & Coke Op., Sept.26,1912; p. 203; 1000 w; 25c.

Meller, K.—*Anlagekosten und Wirkungsgrad bei elektrisch betriebenen Hauptschachtfördermaschinen;* [Cost and relative efficiency of electric mine hoists].—Glückauf, Oct.19, p. 1719-1721*; 45c.

Moore, W. A.—*Electricity in Alluvial Tin Working.*—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 117; 1500 w*; $1.

Morecroft, J. H. and F. W. Hehre.—*A Short Course in the Testing of Electrical Machinery.*—London, 1912; $2.25 (book).

Moser, R.—*Der Einphaseninduktionsmotor;* [The monophase induction motor].—Elektrotechnik & Maschbau, Oct.13, pp. 845-850; Oct.27, pp. 897-903; 65c.

Mountain, W. C.—*Applications of Electricity in Mining;* [Read to Instn. of Electr. Engrs., Newcastle local section].—Electrician, Nov.1, p. 151; 2000 w; 35c.

Müller, —. *Einrichtung und Betrieb der elektrischen Lokomotivförderung in der Braunkohlengrube Friedrich Anna bei Moys;* [Electric haulage at the Friedrich Anna lignite mines, Moys, Prussia].—Braunkohle, June14,1912; 6 pp*; 50c.

Murphy, E. M.—*Electric Hoist at the Hecla Mine;* [Coeur d'Alenes, Idaho; operation and costs].—Amer. Inst. Mng. Engrs., Bull. 69; Sept.,1912; pp. 977-995*; $1.15.

Ohl, W.—*Elektrische Grubenlokomotiven;* [A-E-G electric mine locomotives, accumulator and overhead current types].—A. E. G. Ztg., No. 11, 1912; pp. 1-5*; 50c.

English abstract in Railway News, No. 2529, 1912; pp. 1300-1301*; 50c.

Palmer, LeRoy A.—*Low Costs at the Wasp No. 2 Mine, So. Dakota.*—M. & M., Dec.,1912; p. 281; 2500 w*; 35c.

Pasquier, A. E. du.—*Electric Winding Engines;* [Comparison of systems, and influence of drum profile; from S. Wales Inst. of Engrs., Proc.].—Coll'y Guardn., Sept.20,1912; p. 583; Sept.27, p. —; 8000 w*; 50c. Also in Iron & Coal Trades Rev., Sept.20,1912; p. 413; Sept.27, p. —; 8000 w*; 50c.

Pauly, K. A.—*Deep Mine Hoisting;* [Compares electric vs. compressed-air methods].—Mex. Mng. Jnl., Nov., p. 33; 5000 w*; 25c.

Pepin, M.—*Installations électriques, charbonnage du Poirier;* [Electric central station, sub-station, power transmission and hoisting at Poirier collieries, Belgium].—Annales d. Mines, Belgiq.; Vol. 17; No. 3; 1912; pp. 677-683; 90c.

Perkins, F. C.—*An Electric Hoist with Automatic Control;* [Auchincruive colliery].—M. & S. P., Oct.19, p. 490; 2000 w*; 20c.

Perkins, F. G.—*Changing Steam Hoist to Electric Drive.*—Mining & Engg. World, Sept.21,1912; p. 535; 250 w*; 10c.

Perkins, Frank C.—*An Electrically Driven Percussion Drill.*—Can. Mg. Jnl., Dec.1, 1912; p. 810; 500 w*; 30c.

Philippi, W.—*Zur Frage der Wirtschaftlichkeit elektrischer Hauptschachtfördermaschinen;* [The question of economy of electric hoisting].—Glückauf, July13,1912; pp. 1109-1119; 6000 w; 50c.

Philippi, Prof., C. G. Kleinschmidt, and Dr. von Handorff.—*Wirtschaftlichkeit elektrischer Hauptschachtfördermaschinen;* [Commercial economy of electric hoists for mines; discussion of Philippi's paper].—Glückauf, Oct.12, pp. 1679-1685; 6000 w; 45c.

Pollok, —. *Elektrischer Antrieb von Brikettpressen;* [Electric drive for briquetting presses; various equipments].—Braunkohle, Sept.13, pp. 373-382*; 50c.

Poole, C. P.—*Transformer Connections.*—Power, June18,1912; p. 869; 1500 w*; 15c.

Popeke, A. G.—*A Comparison Between Portable Electric Drills and Portable Air Drills.*—El. Jnl., No. 6, 1912; pp. 535-539*; 50c.

Preston, John C.—*Electrical Safety Devices* (third article).—Pr. Elec. & Eng., Nov.,1912; p. 14; 2000 w*; 15c.

Randall, John.—*Practical Cyaniding* (Part V).—M. & M., Dec.,1912; p. 270; 7000 w*; 35c.

Rasmussen, J.—*The Rasmussen Electric Hoist.*—Mng. Sci., Aug.1,1912; p. 75; 300 w*; 20c.

Rawlings, A. L.—*Earthing in Mines.*—El Rev. (London), Sept.20, p. 452; 500 w; 35c.

Recktenwald, J.—*Elektrische Streckenförderung mit Akkumulator-Lokomotiven;* [Electrical underground haulage with accumulator locomotives] (part 1).—Fördertechnik, Nov.,1912; p. 242; 2000 w*; 65c.

Reiss, L.—*Die elektrischen Anlagen in den Bergwerken;* [Electric equipment and operation in mining].—Soc. de l'ind. Mulhouse, Bull.; 1912; pp. 175-187; 75c.

Revel, —. *Production et distribution de l'énergie électrique aux mines de Lens;* [Electric power production, distribution and uses at the Lens collieries, North France].—Soc. de l'Ind. Minrl. St. Etienne, Bull., Sept.,1912; pp. 281-297*; $1.15.

Rice, C. T.—*Hanging Troughs for Protecting Trolley Wires.*—E. & M. J., Nov.2, p. 831; 1000 w*; 25c.

Rice, C. T.—*Routine of Joplin Hoisting Practice;* [Rapid steam and electric hoisting from shallow depths].—E. & M. J., Sept.14, 1912; p. 491; 1600 w; 25c.

Rice, S.—*Electric Mine Operations; Rotary Converters.*—Mining & Engg. World, June29,1912; p. 1353; 2100 w; 10c.

Richardson, H. K.—*The Modern Dry Cell; Its Development, Construction and Manufacture.*—Met. & Chemi. Engg., Sept., 1912; p. 531; 2000 w*; 35c.

Rogers, J. W.—*Polyphase Synchronous Electric Motors.*—Cassier's Mag., Sept.,1912; pp. 239-249*; 35c.

Rogers, J. W.—*Notes on Electrically Driven Fans for Mining Ventilation.*—Engg. Rev., Oct.15, p. 137; 1800 w; 35c.

Rosenblatt, Girard B.—*Large Synchronous Motors for Compressor Service.*—M. & S. P., Dec.7,1912; p. 723; 5000 w*; 20c.

Sauer, M.—*Elektrotechnik im Bergbau seit dem letzten Bergmannstage in Wien* 1903; [Development of electricity in mining since the last Miners' Convention in Vienna, 1903; read to Allgm. Bergmannstag, 1912].—Montanist. Rundschau, Sept.15,1912; p. 946; 1200 w; 50c.

Sauvage, —. *Antrieb von Grubenventilatoren durch Drehstrommotoren mit regelbarer Umlaufzahl;* [The driving of mine fans by alternating current motors of regulatable speed].—Glückauf, Oct.12, p. 1668-1672*; 45c.

Schneckenberg. E.—*Edison Aggumulatoren; Fabrikation und Gewichtsverringerung;* [Edison storage batteries; their manufacture and weight reduction].—Elektrochem. Zts., Apr.1,1912; p. 1; 4000 w; 45c.

Schnackenburg, L.—*Versuche an dem elektrisch angetriebenen Blockwalzwerk auf der Julienhütte, Oberschlesien;* [Tests of the electric-driven bar-rolling mills at the Julien works, Upper Silesia].—Oberschles. Berg- & Hüttenm. Ver., Zts., July,1912; p. 301; 7000 w*; 50c.

Scott, E. K.—*The Layout and Erection of Power-House Plant;* [Read to Jnr. Instn. of Engrs.; abstract].—Iron & Coal Trades Rev., July5, p. 13; 7000 w*; 35c. Also in Mechl. World, Sept.20,1912; p. 139; 2400 w*; 35c.

Shaw, W. B.—*Earthing as Defined in the Electricity Rules;* [Read to Asso. of Mng. El. Engrs., Lancs. branch].—Iron & Coal Trades Rev., June21,1912; p. 102; 4000 w; 35c.

Shover, B. R., and E. J. Cheney.—*Cost and Efficiency of Alternating vs. Direct Current Motors for Steel Mill Auxiliaries;* [from "General Electric Review"].—Electrician, Oct.18, p. 46; 5000 w; 35c.

Shubart, B.—*Hauling Capacity of Electric Locomotives.*—Coal Age, Sept.28,1912; p. 426; 1000 w*; 25c.

Smillie, S.—*Central Station Power;* [Some advantages of mine stations].—Coal Age, Aug.31,1912; p. 301; 600 w; 20c.

Smith, J. C.—*Transmission Line Design.*—Sibley Jnl., Nov.,1912; pp. 43-52*; 35c.

Springer, J. F.—*Electrically Operated Skip-Hoist;* [Martinsburg, W. Va., limestone crushing plant].—Iron Trade Rev., Aug.29,1912; p. 391; 1800 w*; 20c.

Stevenson, E. W.—*Damage by Electrolysis;* [Urges care in grounding power cables and in bonding rails].—E. & M. J., June22, 1912; p. 1220; 1600 w; 25c.

Still, A.—*Steel Towers for Overhead Transmission Lines.*—Canadian Engr., Oct. 10,1912; p. 569; 3000 w*; 25c.

Stone, S. R.—*Application of Electric Power for Coal Mining.*—Mg. & Eng. World, Dec.14,1912; p. 1085; 4500 w*; 10c.

Stone, S. R.—*Alternating Current Motors for Mines and Mills.*—Mining & Engg. World, Nov.9, p. 839; 5000 w*; 10c.

Strauss, Dr.—*Die Elektrizität im Kalibergbau;* [Applications of electricity in potash mining].—Techn. Blätter, June8,1912; p. 185; June15, p. —; 2000 w; 50c.

Streeter, Robert L.—*Steel Plant Electrical Installations.*—Eng. Mag., Dec.,1912; p. 362; 6000 w*; 35c.

Streeter, R. L.—*Power Machinery of the American Steel Industry; III: Rolling-Mill Engines.*—Engg. Mag., Oct.,1912; pp. 16-35*; 35c.

Sykes, W.—*Power Requirements of Rolling Mills.*—Amer. Inst. Electr. Engrs., Proc. Nov.,1912; pp. 2017-2032*; 65c.

Sykes, S. W.—*Power Consumption of Hoisting Plants;* [Relative economies of electricity, steam and air].—Mines & Minerals, Aug.,1912; p. 49; Sept., p. —; 6500 w*; 65c.

Thomas, G. W.—*Power Consumption of Coal-Cutting Machines;* [Electric; from "Mine & Quarry," June].—Coal & Coke Op., June27,1912; p. 413; 1000 w; 25c. Also in Coal Trade Bull., July15, p. 28; 500 w; 25c.

Thornton, W. M.—*Ignition of Coal Gas and Methane by Momentary Electric Arcs;* [Read to N. of England Inst. of Mng. etc. Engrs.].—Coll'y Guardn., Oct.18, p. 785; Oct.25, p. —; 800 w; 50c. Also in Iron & Coal Trades Rev., Oct.18, p. 623; 8000 w*; 35c.

Thornton, W. M.—*Gas Ignition by Electric Sparks.*—Coal Age, Dec.7,1912; p. 796; 4000 w*; 20c.

Thornton, W. M.—*Ignition of Gas by Electric Spark.*—Coal Age, Nov.23,1912; p. 722; 2000 w*; 20c.

Van Brussel, J. B.—*A German Electrical Installation;* [Power plants, distribution, haulage, sprinkling, pumping; Hibernia collieries].—Coal Age, Nov.9, p. 636; 2500 w*; 20c.

Van Norden, Rudolph W.—*Electric Iron Smelter at Heroult.*—Jnl. Elec., Nov. 23, 1912; p. 453; 4000 w*; 40c.

Wagner, E. B.—*Determination of Generator Capacity for Mine Haulage.*—Coal Age. June22,1912; p. 1209; 1000w*; 20c.

Walker, Wm. H., and Patrick, Walter A. —*The Determination of Oxygen in Iron and Steel by Reduction in an Electric Vacuum*

Furnace. (Paper read before Int. Cong. Appl. Chem.).—Jnl. Ind. & Eng. Chem., Nov.,1912; p. 799; 2800 w*; 75c.

Wenzel, —. *Die elektrisch angetriebene Turbopumpe der Zeche ver. Pörtingssiepen zu Kupferdreh;* [The electric turbo-pumps at the Pörtingssiepen mine, Germany].—Turbine, Oct.5, pp. 12-14; 50c.

Wier, E. M.—*Installation and Maintenance of Telephone, Signal and Power Leads in Mines.*—Coal Mng. Inst. of Amer., Proc. for 1911; 1912; pp. 279-284.

Wiggins, F., and Sons.—*The Use of Mica in the Insulation of Electrical Apparatus.*—El. Rev. (London), Oct. 11, p. 564; 1800 w*; 35c.

Wittich, Lucius L.—*Electric Shot Firing in Coal Mines.*—M. & M., Dec.,1912; p. 243; 1250 w*; 35c.

Wright, J.—*Testing Faulty Localization and General Hints for Wiremen.*—London, 1912; 88 pp; 75c (book).

Wuthrich, G.—*Oerlikon 3-Phase Variable-Speed Cascade-Connected Motor Set Driving Mine Fans.*—Iron & Coal Trades Rev., Oct. 4, p. 557; 1200 w*; 45c.

Zederbohm, —. *Ventilatorantrieb mit Drehstrom Kaskadenmotor auf der Zeche Werne;* [Fan drive with alternating-current cascade motor at Werne colliery, Prussia].—Glückauf, June15,1912; p. 949-955*; 50c.

A. E. G.—*Die wirtschaftliche Regulierung von Drehstrommotoren;* [The control of alternating-current motors].—Berlin, 1912; 30 pp.; 8 figs.; 30c.

"Engine Driver."—*Steam vs. Electric Hoists;* [Safety and driving].—S. Afr. Mng. Jnl., Sept.28, p. 119; 2000 w; 35c.

M.—*Elektrisch betriebener Gesteinsbohrer;* [Wagner electric rock drill].—Ton Industrie Ztg., June8,1912; p. 924; 250 w*; 30c.

Natnl. Electric Light Asso.—*Fuel Oil Production and Status of the Oil Engine in the U. S.;* [Report of "prime movers" committee].—Power, July9,1912; p. 51-53; tables; 2000 w; 15c.

Verein für bergbauliche Interessen in Dortmund.—*Jahresbericht für* 1911; [Tests of compressed-air, storage-battery, overhead direct-current and 1-phase alternating-current locomotives in the mines of the Dortmund district, 1911].—Kohle & Erz, June17,1912; p. 637; 2000 w; tables; 35c. Bergbau, July4, p. 380; 1200 w; tables; 35c. From Zts. f. d. Berg-, H-, & Salinenw., No. 4, 1912.

Spanish abstract in Rev. Minera, July1, p. 313; 1600 w; 35c.

———. *Advantages of 3-Phase Cascade Motors.*—El. Rev. (London), Aug.23,1912; p. 285; 1200 w*; 35c.

———. *A Large Colliery Cable;* [Henley electric cable at Dechmont colliery].—Austral. Coal & Iron Trades Rev., Oct.2, p. 93; 400 w*; 35c.

———. *An Automatically Operated Storage-Battery Mine Locomotive;* [at Heydt, Prussia].—El. Rev. (London), Oct. 11, p. 567; 500 w; 35c.

———. *A Home-Made 40-Ton Electric Mine Locomotive.*—E. & M. J., Oct.5,1912; p. 638; 300 w*; 25c.

———. *A. E. G. Electric Winding Plant at Kippax, Yorkshire.*—El. Rev. (London), Sept.27,1912; p. 499; 1000 w*; 35c.

———. *A Large Electric Hoist;* [Dominion colliery No. 14, Nova Scotia].—Canadian Mng. Jnl., Oct.1, p. 684; 600 w*; 25c.

———. *A New Penna. R. R. Power Plant;* [Iron-ore unloading at Cleveland, Ohio, from lake steamers; power plant].—Iron Age, Aug.29,1912; p. 443; 2500 w*; 30c. Also in Iron Trade Rev., Aug.29, p. 401; 1000 w*; 20c.

———. *A Transvaal Electric Winding Plant;* [West Rand Cons. electric hoists 1 and 2].—Australian Mng. Standd., Sept.19, p. 277; 800 w*; 35c.

———. *Bleichert'sche Elektrohängebahnen im Bergwerksbetriebe;* [Bleichert electric suspended trolleys for transporting materials about mines and mills].—Kohle & Erz, Oct.14, p. 1062; 1600 w*; 35c. Also in Organ d. Bohrtechniker, Oct.15, p. 239; 1800 w*; 45c.

French: Rev. Noire, Oct.27, p. 520; 1300 w*; 35c.

———. *City Deep Electric Man Hoist;* [Equipped with Eddy current brake].—S. Afr. Mng. Jnl., June15,1912; p. 574; 750 w*; 35c.

———. *Conversion and Use of Electricity;* [Hoisting, haulage, pumping, fans; Penn Mary mines, Pa.].—Coal Age, Nov.9, p. 641; 1000 w*; 20c.

———. *Das Leonard Kontrollsystem für elektrische Förderanlagen;* [The Ward-Leonard control in electric mine hoists].—Kali Erz & Kohle, Sept.25,1912; p. 960; 1500 w; 35c.

———. *Deflection and Stress in Overhead Conductors of Aluminum;* [Chart of British Aluminum Co., Ltd.].—El. Rev. (London), July19,1912; p. 117; 500 w*; 35c.

———. *Die Entzündung von Leuchtgas und von Methan durch plötzlich auftretende elektrische Funken;* [The ignition of illuminating gas and of methane by suddenly occurring electric sparks] (Translation from Iron & Coal Trades Rev. of lecture delivered before the Institute of Mining and Mechanical Engineers of the North of England).—Zts. des Zentral-Verbd. Bergbau-Betriebsl. Dec.1,1912; p. 737; 3000 w*; 45c.

———. *Difficulties with an Electric Coal Cutter.*—Coal Age, July6,1912; p. 12; 500 w; 20c.

———. *Drilling and Pumping by Electricity;* [Midway oil field, Calif.].—Oil Age, Oct.18, p. 5; 1000 w; 20c.

———. *Electric Coal Cutters;* [Difficulties in working].—Times Engg. Suppl., Vol. 8,1912, p. 21; 1000 w; 35c.

———. *Electric Excavator Employed on Subway Construction at Buenos Aires.*—Engg. & Contractg., Sept.18,1912; p. 317; 300 w*; 20c.

———. *Electric Haulage Gear for India.*—Ir. & Coal Tr. Rev., Nov.22,1912; p. 835; 1500 w*; 35c.

———. *Electric Motor Drive for Tube Mills.*—Mining & Engg. World, Sept.14,1912; p. 490; 300 w; 10c.

———. *Electric Motors for Mines;* [Some British types].—Coal Age, Aug.31, 1912; p. 283; 4500 w*; 20c.

———. *Electric Smelting in Norway;* [Abstract of article in Teknisk Ukeblad].—Mg. Jnl., Nov.23,1912; p. 1145; 35c.

———. *Electric Wiring at the Penn Mary Mines.*—Coal Age, Nov.16, p. 674; 1000 w*; 20c.

———. *Electric Winders for Canada;* [for Acadia Coal Co.].—Iron & Coal Trades Rev., June28,1912; p. 1031; 500 w*; 35c.

———. *Electrical Accidents in Mines in*

1911; [British].—Iron & Coal Trades Rev., Aug. 2, 1912; p. 169] 7500 w; 35c.

———. *"Electrical Review" List of Electricity Supply Works of the U. K.*—El. Rev. (London), Jun 28,1912 (Supplementary folder); 35c.

———. *Electrically Driven Rolling Mill at Dalzell Works, Motherwell.*—Iron & Coal Trades Rev., May31,1912; p. 873; 1200 w*; 35c.

———. *Electricity in Brown Coal Mines and Mining;* [Developments in Germany].—Coal Age, Aug.3,1912; p. 142; 2000 w*; 20c.

———. *Electricity in Plaster and Lime Plants.*—El. Rev. (Chicago), Oct.12, p. 679; 3000 w*; 20c.

———. *Electricity in a Spanish Lead Mine;* [A. E. G. pumping, hoisting, etc., appliances in El Guindo mine, Sierra Morena range].—El Rev. (London), July26, 1912; p. 139; 1500 w*; 35c.

———. *Electricity in Stone-Cutting Plants;* [Disc saws, planers, cranes, etc., in sandstone plant of J. Tait Stone Co., Chicago].—El. Rev. (Chicago), Aug.17, 1912; p. 295; 3000 w*; 20c.

———. *Electricity and Voltages that are Sometimes Dangerous.*—Mg. & Eng. World, Nov.30,1912; p. 985; 1200 w; 10c.

———. *Electrostatic Separation of Barite and Sphalerite.*—E. & M. J., Dec.7, 1912; p. 1039; 600 w; 25c.

———. *Elektrische Industriebahnen;* [Some Siemens-Schuckert types of mine and industrial electric locomotives].—Kohle & Erz, Oct.14, p. 1078; 300 w*; 35c.

———. *Elektrische Bohrer für Arbeiten in Steinbrüchen;* [Electric drills for quarrying; from "Quarry"].—Kohle & Erz, Sept.16,1912; p. 955; 1200 w; 35c.

———. *Evolution of Electrical Machinery in Mines;* [Discussion of paper read before Assn. of Mg. & Elec. Eng. at Sheffield].—Ir. & Coal Tr. Rev., Nov.22,1912; p. 822; 5000 w; 35c.

———. *Evolution of Motive Power in Anthracite Mines.*—Coal Age, Nov.23,1912; p. 719; 1000 w*; 20c.

———. *Gas-Engine Generating Set at Barnsley Main Collieries.*—Iron & Coal Trades Rev., June14,1912; p. 965; 1000 w*; 35c.

———. *Heuere Elektrohängebahnen;* [New electrically operated suspended trolley systems in mining plants].—Montanist. Rundschau, Oct.1, p. 1059; 1500 w*; 35c.

———. *High-Tension Transmission System of the Hydro-Electric Power Commission of Ontario.*—Canadian Engr., July25, 1912; p. 202; Aug.1, p. 253; 3000 w*; 40c.

———. *Hoisting by Electricity in Mines;* [Notes on German practice].—Coal Age, Sept.7,1912; p. 317; 1200 w*; 20c.

———. *How the Penn Mary Doubled its Power Capacity;* [Heilwood, Pa.; utilization of waste heat and excess power].—Coal Age, Nov.2, p. 606; 2200 w*; 20c.

———. *Inspection of the Clifton Colliery, Nottingham;* [by Natnl. Asso. of Coll'y Managers; includes description of electric plant, haulage, electric drilling, coal-cutters, etc.].—Iron & Coal Trades Rev., July26, 1912; p. 129; 1000 w*; 35c.

———. *Largest Electric Mine Hoist in America;* [Christopher Coal Mng. Co., Franklin county, Ill.].—Mining & Engg. World, July20,1912; p. 112; 1000 w; 10c. Also in E. & M. J., July27, p. 154; 600 w; 25c. Also in Coal & Coke Op., July 25, p. 54; 1000 w; 25c. Also in El. Rev. (Chicago), Aug.3, p. 227; 1000 w; 20c.

———. *Large Synchronous Motors;* [Direct connected to air-compressor shafts at compressor plant of Amalgamated Copper Co., Butte].—Salt Lake Mng. Rev., Sept.15,1912; p. 17; 2000 w*; 25c.

———. *Les lokomotives des mines à accumulateurs;* [Electric storage-battery mine locomotives].—Industrie Electriq., Oct. 25, p. 472; 1000 w*; 50c.

———. *Marquette Iron Range Continued Progress.*—Mg. & Eng. World, Dec.7, 1912; p. 1031; 4000 w*; 10c.

———. *Méthodes américaines pour la commande des machines d'extraction;* [Electric mine-hoist control methods in America].—Industrie Electriq., Oct.25, pp. 464-468*; 50c.

———. *Mixed-Pressure Turbo-Generator at Grimethorpe Colliery.*—Iron & Coal Trades Rev., Sept.6,1912; p. 349; 500 w*; 35c.

———. *Motor Troubles in Colliery Plants;* [Various difficulties and remedies].—Coal Age, Aug.24,1912; p. 256; 1200 w; 20c.

———. *New Electric Mine Pump;* [Deane pump].—Mines & Minerals, Nov., p. 231; 750 w*; 35c.

———. *New Storage-Battery Narrow-Gage Locomotives;* [General Electric types].—Engg. & Contractg., Nov.6, p. 511; 500 w*; 20c.

———. *New Switchboard for Small Mining Plant;* [General Electric board for Stearns mines, Beerthell, Ky.].—Coal Age, June29,1912; p. 1247; 500 w*; 20c.

———. *Petrolmotoren für elektrische Zentralanlagen;* [Oil engines for electric central stations].—Kohle & Erz, Sept.2, 1912; p. 907; 1800 w; 35c.

———. *Perfectionnements Apportés aux Fours Électriques et à leur Application à la Fabrication de l'Acier;* [Improvements in electric furnaces and their application to the manufacture of steel.] (Trans. from Iron and Steel Institute.)—Revue Industrielle, Nov.23,1912, p. 10; 1200 w; 25 cts.; also in Revista Minera, Nov.16, p. 533; 35 cts.

———. *Power Cost in a 6500-Kw. Station;* [Fall River, Mass.].—E. & M. J., Oct. 26, p. 788; 350 w; 25c.

———. *Power Transmission from the Coal Mine;* [Chignecto plant, near Amherst, Nova Scotia].—Engg. Record, Sept. 7, p. 253; 800 w; 25c.

———. *Prescriptions normales;* [Definition and standards for electrical engines and transformers (excepting traction material) adopted by the Comité Electrotechnique Belge, Feb.20,1912].—Annales d. Mines (Belgiq.), Vol. 17, No. 4, 1912; pp. 977-984; 65c.

———. *Shafting and Belting Calculations.*—E. & M. J., Nov.23,1912; p. 978; 500 w*; 25c.

———. *Some Practical Aspects of Electric Winding* (So. Africa).—Mg. & Eng. World, Dec.14,1912; p. 1083; 1600 w*; 10c.

———. *Storage Battery Electric Haulage Locomotive;* [General Electric types].—Coal & Coke Op., Nov.7, p. 293; 1000 w*; 25c.

———. *Switchboards for Small Mining Plants.*—E. & M. J., Sept.28,1912; p. 582; 500 w*; 25c.

———. *The Armeath System of Cable Protection.*—Coll'y Guardn., Aug.23,1912; p. 383; 500 w*; 35c.

———. *The British Revised Electricity Rules;* [Discussion before Lancs., Cheshire & N. Staffords. branch of Asso. of Mng. El. Engrs.].—Iron & Coal Trades Rev., June21, 1912; p. 992; 4000 w; 35c.

———. *The Brown-Boveri-Scherbius Method of Speed Regulation for Induction Motors.*—Iron & Coal Trades Rev., Aug. 2, 1912; p. 171; 3000 w*; 35c.

———. *The Electrical Equipment of a South Wales Colliery;* [new Britannia colliery at Pengam; includes description of modified Ilgner flywheel hoist].—Canadian Mng. Engr., June15,1912; p. 405; 1800 w*; 25c.

———. *The Electrical Haul;* [Efficiency in lay-out].—Coal Age, Aug.17,1912; p. 213; 800 w; 20c.

———. *The New Rules for Electricity in Mines;* [British; earthing and the Consett case].—El. Rev. (London), Aug.30,1912; p. 321; 1800 w; 35c.

———. *The Pape Electric Miner's Lamp.*—Iron & Coal Trades Rev., June14, 1912; p. 963; 1000 w*; 35c.

———. *The Vibration of Electric Machinery.*—Iron & Coal Trades Rev., Oct.4, p. 560; 800 w; 45c.

———. *The Utilization of Electric Power for Iron Mining;* [Cleveland Cliffs electrification on Marquette range, Lake Superior; 1: Carp River hydro-electric plant].—Iron Trade Rev., July25,1912; p. 157; 3000 w*; 25c.

———. *The Winhey Leakage Detector.*—Coal Age, Nov.23, 1912; p. 717; 1000 w*; 20c.

———. *3000 KW. Vertical Rotary Converters;* [Two Westinghouse synchronous booster, commutating-pole machines for N. Y. Edison plant].—Canadian Engr., Aug. 22,1912; p. 342; 1000 w*; 25c. Also in Power, Aug.27, p. 298; 1200 w*; 15c.

———. *Treuil d'extraction électrique de la Soc. Anon. des Charbonnages de Noël-Sart-Culpart, à Gilly;* [Electric hoist at the Nöel-Sart-Culpart colliery, Gilly].—Rev. Electriq., Vol. 17, 1912; pp. 221-226*; 50c.

———. *Trouble with an Electric Fan.*—Coal Age, Oct.5, p. 460; 500 w; 20c.

———. *Use of Electrical Energy in the Mines of the Empire District.*—El. World, Aug.31, pp. 445-449; 25c.

———. *Utilization of Electric Power for Iron Mining;* [in Lake Superior district; II: Economies of electricity over steam for hoisting].—Iron Trade Rev., Aug.1,1912; p. 203; 3000 w*; 20c.

———. *Ventilatoren für Raumbelüftung;* Ventilation of mine chambers by electric fans].—Kohle & Erz, Sept.30, p. 100; 1000 w; 35c.

———. *Westinghouse Equalizer-System Hoisting Set;* [Tests of electric hoist at Calumet & Arizona Mng. Co.].—B. C. Mng. & Engg. Record, July,1912; p. 380; 1200 w*; 35c.

———. *Without a Coal Pile;* [Electric power plant, Shreveport, La., using natural gas to raise steam].—Practl. Engr., Oct.15,1912; p. 1021; 1500 w*; 25c.

Hydro-Electric

Aikens, Warren.—*Hydro-Electric Power in the Butte-Anaconda District, Montana.*—Mg. & Eng. World, Nov.30,1912; p. 987; 6000 w*; 10c.

Aikens, W.—*Development and Operation of Water-Power Plants;* [Chiefly in western mining districts].—Mining & Engg. World, Sept.28,1912; p. 563; 3000 w*; 10c.

Aikens, W.—*Pioneer Power Company of Western Mining Districts;* [Telluride Power Co. operations in Colorado, Utah, etc.].—Mining & Engg. World, Oct.5,1912; p. 609; 4000 w*; 10c.

Aikens, W.—*Hydro-Electric Power Plants in California Oil Fields.*—Mining & Engg. World, Oct.26, p. 751; 4500 w*; 10c.

Aikens, W.—*Electric Power for Utah and Idaho Mines;* [Describes various power plants].—Mining & Engg. World, Oct.12, p. 657; Oct.19, p. 703; 7000 w*; 20c.

Bateman, G. C.—*Power Development in Cobalt, Ontario.*—Canadian Engr., June20, 1912; p. 815; 1500 w*; 25c.

Bliss, H. H.—*New San Joaquin Power Plant; California.*—Power, July16,1912; p. 74; 1500 w*; 15c.

Buckner, N.—*Hydro-Electric Development in Western North Carolina.*—Cassier's Mag., July,1912; p. 81; 1600 w*; 35c.

Edwards, G. E.—*Hydraulic Power on the Marquette Range;* [Cleveland Cliffs Co. hydro-electric plant, Carp River].—Mining & Engg. World, Aug.24,1912; p. 333; 2700 w*; 10c.

Ensign, O. H.—*A Hydroelectric Plant for Construction Work;* [Boise, Idaho].—Engg. Record, Aug.24,1912; p. 209; 1500 w*; 20c.

Etcheverry, B. A.—*The Design of a Reinforced Concrete Flume.*—Jnl. of El'y, Power & Gas, Oct.19, p. 338; 1600 w*; 35c.

Foster, H. W.—*Hydroelectric Developments on the Presumpscot River, Me.;* [Read to Maine Soc. of Civ. Engrs.; abstract].—Engg. Record, Nov.2, p. 483; 1800 w*; 20c.

Galloway, J. D.—*Hydroelectric Power Plants in California;* [Read to Amer. Inst. El. Engrs., San Francisco section].—Jnl. of El'y Power & Gas, Oct.12, p. 313; 4000 w*; 35c.

Gillette, Halbert P.—*The Appraisal of Water Power Rights.*—Eng. & Contr., Dec. 4,1912; p. 624; 6000 w; 20c.

Hatch, E. H.—*A Hydroelectric Plant in Chile;* [Cahacpral plant of Braden Copper Co.].—Engg. Record, Sept.28, p. 356; 2100 w*; 20c.

Kennedy, H. J.—*Wood-Stave Pipe Distribution.*—Jnl. of El'y Power & Gas, Nov.9, p. 401; 1200 w*; 30c.

Knowles, Morris.—*Central Water Works System of Tennessee Coal, Iron & Ry. Co.*—Eng. Rec., Nov.23,1912; p. 564; (part 1); 5000 w*; 20c.

Lee, Chas. A.—*Enlargement of the Coquitlam-Buntzen Hydroelectric Power Development, Vancouver, B. C.*—Engg. Record, Sept.21,1912; p. 312; 6000 w*; 25c.

Macomber, G. S.—*The Cornell University Hydro-Electric Power Plant.*—Sibley Jnl., Nov., p. 53-61*; 35c.

McBride, Harry A.—*Swiss Hydro-Electric Power Development.*—Daily Consular & Trade Reports, Dec.12,1912; 10 p; 15c.

Mead, D. W.—*The Runaway Speed of Waterwheels, and Its Effect on Connected Rotary Machinery.*—Amer. Inst. Electr. Engrs., Proc., July,1912; pp. 1391-1412*; $1.15.

Meyer.—*Das Wasserkraftwerk "El Molivar" am Jucar;* ["El Molivar" hydroelectric plant supplying high-tension alternating current to Madrid, Valencia, Cartagena, etc., Spain].—Ver. Deu. Ingr., Zts; July 27, 1912; p. 1181-1185*; 75c.

Moulton, S. A.—*A Comparison of Efficien-*

cies and Costs of Steam, Water, Gas and Oil Power Generation; [From report of Maine Water Storage Commission].—Engg. & Contractg., Sept.4,1912; p. 254; 12,000 w*; 20c.

Myrick, C. M.—*An Experience in the Use of Water Power.*—Amer. Inst. Mng. Engrs., Bull. 70, Oct.,1912; p. 1071-1074.

Randall, H. D.—*Water-Power Resources near Salt Lake;* [Paper read before Utah Soc. Eng.].—Salt Lake Mg. Rev., Nov.30, 1912; p. 17; 2000 w; 25c.

Rinkel.—*Ueber die Wirtschaftspolitik von Wasserkraft-Elektrizitätswerken;* [Some industrial factors of hydro-electric power plants; power users; competition with steam].—E. T. Z., June20,1912; p. 631-635*; 50c.

Simmons, J.—*The Dakota Power Co.'s Hydro-Electric Plant;* [Black Hills district].—Mining & Engg. World, July13, 1912; p. 55; 1500 w*; 10c.

Switzer, J. A.—*Water-Power Development in the South.*—Cassier's Mag., June, 1912; pp. 561-576*; July, pp. —; 65c.

Wilson, W.—*The Hora Hora Power Scheme, N. Zealand.*—Mng. & Engg. Rev., Oct., p. 39; 1500 w*; 35c.

Wise, J. H.—*Bear Valley Hydroelectric Development, Calif.*—Jnl. of El'y, Power & Gas, Aug.31,1912; p. 171; 1200 w*; 30c.

Wright, C. H.—*Electrical Transmission for Mining and Other Purposes in the Maritime Provinces, Canada.*—Jnl. Mg. Soc., N. S., Vol. XVII, 1912; p. 45; 6 p.; 50c.

———. *A 120,000 Kw. Hydroelectric Power Development with 4000-ft. Head;* [Big Creek, Fresno county, Cal.].—Engg. News, Nov.7, p. 843; 1800 w*; 25c.

———. *Appalachian Power Development on New River, Va.*—Coal & Coke Op., July 11,1912; p. 21; 1600 w; 20c.

———. *A 63-inch gate under a 148-ft. Head;* [Adamello plant, Milan, Italy].—Engg. News, Aug.15,1912; p. 276; 600 w*; 25c.

———. *Developments on Spokane River, Wash., II;* [Steam turbine relay station; switching and substations].—Electr. World, June29,1912; p. 1425-1434*; 25c.

———. *Economics of Water Power;* [Editorial].—Engg. Record, Oct.5, p. 365; 800 w; 20c.

———. *Electrical Installations of the Lena Gold Mng. Co.*—Mng. Jnl., June29, 1912; p. 667; 2500 w*; 35c.

———. *Head Increasers in a Hydro-electric Plant at Eldora, Iowa.*—Engg. Record, July6,1912; p. 16; 1000 w*; 20c.

———. *Hydro-Electric Development at Verdi, Nev.*—Jnl. Elec. Power & Gas, Nov. 30,1912; p. 475; 1200 w*; 35c.

———. *Hydro-Electric Development on Big Creek, California.*—Engg. Record, Sept. 14,1912; p. 287; 1000 w*; 20c.

———. *Hydro-electric Plant of the Adamello Electric Supply Co.;* [Lombardy, Italy].—Electrician, July19,1912; p. 608; July26, p. 649; 5000 w*; 50c.

———. *Hydro-electric Station at Gatun Spillway, Panama Canal.*—Canadian Engr., July25,1912; p. 231; 1800 w*; 25c. Also in Engg. Record, July27, p. 101; 1800 w*; 25c.

———. *Jordan River Development of the Vancouver I'd. Power Co.*—Engg. Record, Oct.19, p. 436; 6000 w*; 25c.

———. *Largest Direct Current Generators;* [Southern Aluminum Co. plant at Whitney, S. Car.].—E. & M. J., Oct.26, p. 774; 500 w; 25c.

———. *Power Plant of the Spanish River Pulp and Paper Mills, Ltd.;* [Espanola, between Sudbury and Sault Ste. Marie, Ontario].—Canadian Engr., Aug.22, 1912; p. 337; 1000 w*; 25c.

———. *Problems of a Small Hydro-electric Network.*—Engg. Record, Aug24, 1912; p. 197; 800 w; 20c.

———. *Recent Developments at Shawinigan Falls, Quebec;* [from the Electrical World].—Electrician, Aug.16,1912; p. 774; 4800 w*; 35c.

———. *Removing Obstacles to Complete Utilization of Water Powers.*—Mining & Engg. World, Sept.28,1912; p. 561; 600 w; 10c.

———. *Schwarze und weisse Kohle in der Schweiz;* [Competition between coal and hydro-electric power in Switzerland].—Organ d. Bohrtechniker, Sept.15,1912; p. 214; 1800 w; 45c.

———. *10,000-hp. High-Pressure Turbines;* [Biaschina hydro-electric station, near Bodio, northern Italy].—Canadian Engr., Nov.7, p. 699; 1000 w*; 25c.

———. *The Coquitlam-Buntzen Hydro-Electric Power Development;* [Vancouver, B. C.].—Canadian Engr., Oct.10,1912; p. 577; 5500 w*; 25c.

———. *The Hydro-electric Plant of the Simcoe Ry. and Power Co.;* [Georgian Bay district, Ontario].—Canadian Engr., June 20,1912; p. 830; 3500 w*; 25c.

———. *The Ocoee Hydro-electric Development;* [Eastern Tennessee Power Co.].—Engg. Record, June22,1912; p. 676; 2100 w*; 25c.

———. *The Utilization of Electric Power for Iron Mining;* [Cleveland Cliffs electrification on Marquette range, Lake Superior; 1: Carp River hydro-electric plant; 2: Electric hoisting and air compression].—Iron Trade Rev., July25,1912; p. 157; Aug.1, p. 203; 6000 w*; 45c.

———. *The Vancouver Island Power Co.; Jordan River Development, Canada* (second article).—Can. Eng., Dec.5,1912; p. 819; 5000 w; 25c.

———. *The Water Wheels at Keokuk Hydroelectric Plant;* [10,000-hp. single-runner Francis turbines].—Engg. Record, Nov.16, p. 536; 2500 w*; 20c.

———. *The Winnipeg Hydro-Electric Power Station.*—Engnrg., July26,1912; p. 107; Aug.2, p. —; 5400 w*; 50c.

———. *300,000 HP. at Keokuk, Iowa, by Pouring the Mississippi River Through Turbines at 32 Ft. Head.*—Practl. Engr., Sept.1,1912; p. 865; 6000 w*; 25c. Also in Engg. & Contractg., Aug.21, p. 198; 2600 w; 15c.

———. *Water Power from the Au Sable River;* [Michigan; 9000 hp. plant shipping power at 140,000 volts].—Engg. Record, Aug.31,1912; p. 246; 2000 w*; 25c.

Electric Blasting

See under "Explosives and Blasting" (Mine and Mining).

Lighting in Mines and Mills

For electric lights and safety lamps in mining, see under Mine and Mining ("Lighting; Signaling").

COMPRESSED AIR

Bansen, Hans (Editor).—*Die Bergwerksmaschinen, II: Gewinnungsmaschinen;* [Mine Machinery; Vol. II: Mining Machinery; by A. Gerke, L. Herwegen, O. Pütz, and K. Teiwes; devoted to dredges, power shovels, stripping machines; hydraulic monitors and elevators; compressors; drills, coal-cutters, and tunneling machines; wedging; electric blasting].—Berlin, 1912; 474 pp.; 393 figs.; $5.50 (book).

Barr, Geo.—*Air Compressors;* [Paper read before Manch. Assn., Eng.].—Mech. World, Nov.15,1912; p. 231; 2000 w*; 15c.

von Bavier, Th.—*Untersuchung einer Kompressoranlage auf der Zeche Unser Fritz;* [Test of a compressor plant at the "Unser Fritz" colliery, Prussia].—Glückauf, June29,1912; p. 1041-1042; 50c.

Bernstein, —. *Die Fortschritte auf dem Gebiete der Drucklufterzeugung und deren wirtschaftliche Bedeutung;* [Advances in air compression and their industrial significance].—Dingler's Polytechn. Jnl., Oct.5, pp. —; Oct.19, pp. 660-665*; Nov.2, pp. —*; $1.25.

Blau, E.—*Turbokompressoren;* [Turbocompressors].—Kohle & Erz, Sept.9,1912; p. 921; 1000 w; 35c.

Corbett, R. H.—*Description of an Air-Balanced Hoisting Engine;* [Franklin system; descending skips compress air which is used with steam in hoisting loads; read to Lake Superior Mng. Inst.].—E. & M. J., Sept.21,1912; p. 553; 1400 w*; 25c.

Czermak, A.—*Ueber die Wirtschaftlichkeit der diversen Grubenlokomotivförderungen mit besonderer Berücksichtigung des Ostrau-Karwiner Revieres;* [Efficiency comparison of combustion, compressed-air and electric haulage engines, especially in the Ostrau-Karwin coal field, Austria].—Montanist. Rundschau, June16,1912; pp. 589-594*; July1, pp. 638-642*; 75c.

Dobbelstein, O.—*Versuche mit Druckluftstrahlapparaten und Ventilatoren zur Sonderbewetterung;* [Compressed-air ejectors and fans for special mine ventilation; comparative operating and cost tests of Körting and Altena ejectors and Turbon, Elektra, Kortmann, and Frölich-Klüpfel fans].—Glückauf, Aug.30,1912; pp. 1277-1285*; 50c.

Eriksson, H.—*Eine neuzeitliche schwedische Druckluftanlage;* [A compressor plant and drilling costs in Swedish iron mining].—Glückauf, Aug.24,1912; pp. 1368-1372*; 50c.

Eves, R. W.—*Caring for the Air Compressor;* [Gage on intercooler; detection of leaks in pipe lines; record forms].—Practl. Engr., Aug.15,1912; p. 847; 1800 w*; 25c.

Fessel, G.—*Wasserhaltung für Ton-, Kohlen- und andere Gruben unter besonderer Berücksichtigung der Heberanlagen;* [Mine and pit drainage with special reference to the air lift for deep mines; Rotta collieries near Halle].—Kohle & Erz, Nov.4, p. 1154; 2100 w*; 35c.

Giller, Th.—*Neuere Druckluftlokomotiven für Grubenbahnen;* [Newer types of compressed-air locomotives for mines; read to Allgm. Bergmannstag, Vienna, Sept., 1912; abstract].—Montanist. Rundschau, Sept.15, 1912; p. 962; 1000 w; 50c.

Gilman, G. H.—*Measuring Air Consumption.*—E. & M. J., July6,1912; p. 28; 750 w*; 25c.

Gilman, G. H.—*Measuring Air Consumption.*—Compr. Air Mag., Aug.,1912; p. 6510; 500 w*; 25c.

Green, V. E.—*Compressed Air, Its Generation and Applications.*— Birmingham Engg. & Mng. Jnl., 1912, No. 4, pp. 216-223*; 45c.

Guérin.—*Locomotives à air comprimé;* [Compressed-air haulage at the Levant du Flénu collieries, Belgium].—Annales d. Mines (Belgiq), Vol. 17, No. 3; 1912; p. 631-637; 90c.

d'Haenens.—*Emploi dans les travaux souterrains d'un compresseur mobile;* [Use of a portable compressor underground, Nord de Charleroi colliery, Belgium; used in supplying air to hammer drills in shaft sinking].—Annales d. Mines Belgiq., Vol. 17, No. 3; 1912; p. 656; 500 w*; 90c.

Havliczek, J.—*Betriebsergebnisse bei Zentrifugalpumpen und Turbokompressoren;* [Some practical results of centrifugal pumps and turbo-compressors; read to Allgm. Bergmannstag, Vienna, 1912; abstract].—Montanist. Rundschau, Sept.15 1912; p. 948; 700 w; 50c.

Herberts, H.—*Der Elektromotor im Vergleich zur Pressluftmaschine zum Antrieb von Schacht-Fürdermaschinen;* [Electric motor vs. compressed-air drive of mine hoists; critical review of Pauly's paper before Amer. Inst. Mng. Engrs.].—Fördertechnik, Sept.,1912, p. 195; 7500 w*; 50c.

Heym.—*Die Kompressorpumpe;* [Compressor pumps, their operation, advantages and disadvantages].—Turbine, July20,1912; pp. 373-375; 50c.

Karger. —. *Moderne Hochdruckkompressoren;* [Modern high-pressure compressors].—Oestr. Ingr. & Archt. Ver., Zts., June28,1912; 4 pp*; 50c.

Koneczny, Fr.—*Vergleichende Versuche über den Luftverbrauch von Druckluftlokomotiven;* [Comparative tests of air consumption of Meyer, Ruhrtaler, Schwartzkopff and Borsig compressed-air locomotives].—Montanist. Rundschau, Sept.20,1912; pp. 1004-1009; 35c.

Leroux, A.—*La traction souterraine par locomotives à air comprimé dans les mines françaises;* [Mine haulage by compressed-air locomotives in France].—Soc. de l'Ind. Minrl. St. Etienne, Bull., Sept.,1912; pp. 299-336*; $1.15.

Litz, V.—*Untersuchungen an Tunnel-Druckluftlokomotiven;* [Tests of various types of compressed-air locomotives in tunnel construction].—Glückauf, Nov.9, p. 1825-1833*; 45c.

Liwehr, E.—*Verwendung von Pressluft im Bergbaubetriebe;* [Applications of compressed air and compressed-air machinery in mining].—Zts. f. kompr. Gase, Dec.,1911; pp. 41-45*; Jan.,1912; pp. 67-72*; Feb., pp. 81-86; June, pp. 149-155*; July, pp. 163-169*; $1.90.

McCluskey, H.—*Electric vs. Compressed Air Haulage and Pumping in Mines;* [Experiences on Pittsburgh seam].—Coal Age, Sept.7,1912; p. 333; 600 w; 20c.

Meuskens, Cl.—*Die maschinelle Abbauförderung und ihre Wirtschaftlichkeit im Bergbau;* [Mechanical face conveyors in potash mines, especially with compressed air drive; their practical applications and economy].—Techn. Blätter, June8,1912; pp. 7-185*; 8000 w*; 35c.

Miller, F. S.—*Commercial Value of the Air Lift.*—Practl. Engr., Nov.15, p. 1142; 1600 w*; 20c.

zur Nedden, F.—*Construction and Operation of Turbo-Blowers and Compressors;* [1: Fundamentals of design].—Engg. Mag., July,1912; p. 547-562*; 35c.

Nelson, A.—*Obtaining the Maximum Eff-*

ciency from Compressed Air.—Sci. & Art of Mng., July6,1912; p. 571; 1000 w*; 35c.

Ostertag, P.—*Bemerkenswerte Anlagen von Turbokompressoren;* [Some noteworthy turbo - compressors; Pokorny - Wittekind compressors at the Königsborn and Reden mines; blast furnace blowers for Japan].—Zts. f. Turbinenwesen, Sept.30, p. 421-426*; 50c.

Pauly, K. A.—*Deep Mines Hoisting;* [Compares electric vs. compressed-air methods].—Mex. Mng. Jnl., Nov., p. 33; 5000 w*; 25c.

Popke, A. G.—*A Comparison Between Portable Electric Drills and Portable Air Drills.*—El. Jnl., No. 6, 1912; pp. 535-539 50c.

Randall, John.—*Practical Cyaniding* (Part V).—M. & M., Dec.,1912; p. 270; 7000 w*; 35c.

Read, T. T.—*Compressed-Air Hoisting at Butte.*—M. & S. P., Nov.2, p. 554; 1800 w*; 20c.

Rice, R. H.—*Relative Cost of the Turbine, Turbo-Compressor and the Gas Engine;* [Read to Amer. Soc. Mechl. Engrs.; abstract].—Iron & Coal Trades Rev., Nov.1, p. 716; 7000 w; 35c.

Richards, F.—*Explosion of Air-Receiver Due to Oil.*—Power, July30,1912; p. 147; 1200 w*; 15c.

Richards, F.—*Compressed-Air Storage in Rock.*—E. & M. J., Nov.9, p. 880; 600 w*; 25c.

Richards, F.—*Compressed Air for Raising Water.*—Compr. Air Mag., July,1912; p. 6484; 1800 w; 25c.

Rosenblatt, Girard B.—*Large Synchronous Motors for Compressor Service.*—M. & S. P., Dec.7,1912; p. 723; 5000 w*; 20c.

Schultze, K.—*Einige auf der bergmännische Austellung zu Essen ausgestellten Gegenstände;* [Some exhibits at the Essen mining exhibition, 1911; Meyers and Schwartzkopf compressed-air locomotives and compressor accessories].—Bergbau, July4, p. 377; July11, p. 389; 3000 w*; 50c.

Schultze, K.—*Mengenverluste in Druckluftanlagen;* [Air losses in compressed-air plants].—Glückauf, July6,1912; pp. 1078-1082*; 50c.

Shawfield, C. E. C.—*Recent Developments in the Rotary Air-Pump and Condenser.*—Electrician, June14,1912; p. 390; 3500 w*; 35c.

Sherwood, M. W.—*Air Compressor Talks Without Mathematics;* [Compressed air in pumping and other uses].—Ideal Power, Aug.,1912; p. 119; 1000 w; 20c.

Streeter, R. L.—*Power Machinery of the Steel Industry;* [Iron-ore mining; describes various hoists and uses of compressed air].—Engg. Mag., Aug.,1912; pp. 681-698*; 35c.

Streeter, R. L.—*Power Machinery of the American Steel Industry;* [Pumps, air compressors and turbo-blowers, turbines and auxiliary power plant].—Engg. Mag., Nov., 1912; pp. 204-221*; 35c.

Sykes, S. W.—*Power Consumption of Hoisting Plants;* [Relative economies of electricity, steam and air].—Mines & Minerals, Aug.,1912; p. 49; Sept., p. —; 6500 w*; 65c.

Th. v. B.—*Kompressoranlage auf Zeche Unser Fritz;* [Compressor plant at the "Unser Fritz" colliery, Prussia].—Bergbau, Aug.8,1912; p. 449; 500 w*; 35c.

Verein für bergbauliche Interessen in Dortmund.—*Jahresbericht für* 1911; [Tests of compressed-air, storage battery, overhead direct-current and 1-phase alternating-current locomotives in the mines of the Dortmund district, 1911].—Kohle & Erz, June17, 1912; p. 637; 2000 w; tables; 35c. Bergbau, July4, p. 380; 1200 w; tables; 35c. From Zts. f. d. Berg-, H-, & Salinenw., No. 4, 1912.

Spanish abstract in Rev. Minera, July1, p. 313; 1600 w; 35c.

Wightman, L. I.—*Regulation of Power-Driven Air Compressors.*—Compr. Air Mag., Aug.,1912; p. 6522; 1200 w; 25c.

Williamson, A. S.—*An Automatic Electrically Operated Air Admission and Exhaust Valve.*—Compr. Air Mag., Oct.,1912; p. 6584; 1200 w*; 25c.

"Brychan."—*Haulage; The Transmission of Power* [Chiefly compressed air].—Sci. & Art of Mng., Aug.3,1912; p. 610; 1400 w; 35c.

"Transmitter."—*The Design of Air Compressors.*—Mechl. World, Jan.19,1912; p. 31; Feb.16, p. 78; March22, p. 138; Apr.5, p. 162; May10, p. 223; July12, p. 19; Sept. 6, p. 114; 17,000 w; $1.20.

———. *A Compressed-Air Concrete Mixer and Conveyor.*—Engg. News, Aug. 8, 1912; p. 244; 2100 w*; 20c.

———. *Air-Lift Wells at St. Paul, Minn.*—Practl. Engr., Sept.15,1912; p. 940; 1200 w*; 25c.

———. *A New Design of Straight Line Air Compressor;* [Chicago Pneumatic Tool Co.].—Engg. News, Nov.7, p. 845; 500 w*; 25c.

———. *A Rand Mines Power Co.'s Compressor Station.*—S. Afr. Mng. Jnl., May18, 1912; p. 417; 2500 w; 35c.

———. *Belt-Driven and Motor-Driven Air-Compressors;* [Broom-Wade, Ltd., types].—Engnrg., Nov.8, p. 640; 500 w*; 35c.

———. *Chicago Pneumatic Air Compressor.*—E. & M. J., Oct.26, p. 791; 350 w*; 25c.

———. *Compressed-Air Meter;* [Excelsior Airometer].—E. & M. J., Nov.2, p. 832; 200 w; 25c.

———. *Compressed-Air Tunnel Driven Without a Shield Through Wet Earth at Eastview, N. Y.*—Engg. Record, July20, 1912; p. 69; 3300 w*; 25c.

———. *Der Turbokompressor;* [Turbo-compressors; their construction and advantages].—Zts. f. Kompr. Gase, May,1912; p. 135-137*; 50c.

———. *Diagram for Determining the Volume of Air Required by Air Drills at Various Pressures and Altitudes;* [tables of Norwalk Iron Work Co.]—Engg. & Contractg., Aug.14,1912; p. 185; 200 w*; 20c.

———. *Direct Steam for Air Compression;* [Used in Louisiana sugar refineries].—Compr. Air Mag., July,1912; p. 6487; 750 w*; 25c.

———. *Electrically-Driven Air Compressors;* [Robey control valves].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 163; 1200 w*; $1.

———. *Electrically-Driven Air Compressor;* [for Great Western Coll'y Co.].—Iron & Coal Trades Rev., July5,1912; p. 18; 500 w; 35c.

———. *Evolution of Motive Power in Anthracite Mines.*—Coal Age, Nov.23,1912; p. 718; 1000 w*; 20c.

———. *Large Synchronous Motors;* [Direct connected to air-compressor shafts at compressor plant of Amalgamated Copper

Co., Butte].—Salt Lake Mng. Rev., Sept. 15,1912; p. 17; 2000 w*; 25c.

———. *Portable Oil-Motor and Air-Compressor;* [Broom-Wade system].—Engnrg., Sept.13,1912; p. 367; 300 w*; 35c.

———. *Rules and Legislation Regarding Compressed Air Work;* [Read at Internatnl. Congr. of Hygiene].—Engg. Record, Oct.19, p. 435; 1000 w; 25c.

———. *Stroke Counter for Compressors.*—E. & M. J., June 29,1912; p. 1269; 150 w; 25c.

———. *Test Showing Economy of Using Reheater in Compressed-Air Line.*—Engg. & Contractg., July31,1912; p. 119; 400 w; 20c.

———. *Testing Air Consumption of Drills.*—E. & M. J., June29,1912; p. 1268; 500 w*; 25c.

———. *The "Davis-Lyall" Air-Speed Indicator.*—Iron & Coal Trades Rev., July5, 1912; p. 9; 500 w*; 35c.

———. *The Robinson Central Compressor Station.*—S. Afr. Mng. Jnl., Junel, 1912; p. 501; 1000 w*; 35c.

———. *The Sterling Economizer;* [For reheating compressed-air for rock drills].—Ideal Power, July,1912; p. 95; 1500 w*; 20c.

———. *The Use of Baby Air Hoists in Mines;* [in Australia].—Austral. Coal & Iron Trades Rev., Oct.2, p. 97; 600 w; 35c.

———. *Turbo-Blowers and Turbo-Compressors;* [Tests of Kühnle, Kopp & Kausch German equipment].—Iron & Coal Trades Rev., May31,1912; p. 874; 2000 w*; 35c.

———. *Ueber die Wahl eines Luftkompressors;* [Choice of air compressors; descriptions of several German types].—Kohle & Erz, Aug.26, p. 881; 1000 w*; 35c.

———. *Underground Compressed-Air Hauling Engines;* [Uskside types in S. Wales].—Iron & Coal Trades Rev., Aug.16, 1912; p. 244; 400 w*; 35c.

———. *Underground Haulage at Oak & Woodpark Collieries;* [6x10 in. compressed-air haulage engine].—Iron & Coal Trades Rev., Oct.11, p. 596; 750 w*; 35c.

———. *Use of Turbo-Compressors in the Mining Field.*—Mining & Engg. World, July6,1912; p. 3; 4000 w*; 10c.

———. *Water Economy and Electric Pumping;* [Discusses relative economy of air-lift pump].—El. Rev. (London), June 14,1912; p. 951; 1000 w; 35c.

———. *Westinghouse Turbo-Compressors With Special Reference to an Installation at the New Hucknall Colliery.*—Iron & Coal Trades Rev., Junel4,1912; p. 950; 2000 w*; 35c.

———. *Westinghouse Turbo-Blowers and Compressors.*—Coll'y Guardn., June28,1912; p. 1289; 1800 w*; 35c.

COMBUSTION ENGINES

Adams, J. M.—*Approaching Era of Oil Power;* [Read to National Gas Asso., Milwaukee, 1912].—Oil Age, Aug.16,1912; p. 2, p. 5; 2500 w; 20c.

Allen, C. V.—*Mexico's Future Power;* [Describes Bolinder oil engine].—Mex. Mng. Jnl., Aug., 1912; p. 41; 1000 w*; 25c.

Arnoux, —. *L'allumage électrique des moteurs à explosions et ses récents progrès;* [Recent progress in electric ignition in combustion engines].—Soc. d. Ingrs. Civil. France, Mém., 1912, No. 6, pp. 823-869*; $1.

Bernewitz, M. W. von.—*Power at the Waihi Mills, N. Z.;* [Waihi and Waikino; gas-engines and steam].—M. & S. P., Nov. 9, p. 591; 700 w*; 20c.

Bikoff, N. and G. von Doepp.—*Die internationale Ausstellung von Verbrennungsmotoren in St. Petersburg;* [The international exhibit of oil and combustion engines at St. Petersburg; reprinted from series of papers in "Gasmotorentechnik, 1911-1912].—Berlin, 1912; 52 pp.*; $1.25.

Blakey, J. H.—*The Gas Turbine;* [Haradovine and Holzwarth machines; from "Le Gaz"].—Practl. Engr., Oct.15,1912; p. 1047; 1500 w*; 25c.

Bright, D. M.—*The Application of Diesel Engines to Land and Marine Work.*—Canadian Engr., Nov.7, p. 696; 2000 w*; 25c.

Brown, Everard.—*Testing Internal Combustion Engines.*—Power, June25,1912; p. 905; 600 w; 15c.

Brown, Ev.—*Utilization of Blast Furnace Gas;* [Under boilers and in gas engines; fuel efficiency].—Power, Oct.8,1912; p. 533; 1400 w; 15c.

Bütow and Dobbelstein.—*Untersuchung eines mit Teeröl betriebenen* 480 *PS Diesel motors;* [Tests of a 480-hp. Diesel engine, burning coal-tar oil, at the Augsburg-Nürnberg machine works for generating electricity].—Glükauf, June22,1912; p. 988-986*; 50c.

Cauldwell, F. W.—*Oil and Gas Motors in Southern Russia;* [Baku exhibition of oil and gas motors, May-June,1912].—U. S. Consul. Rep., July22,1912; p. 369-374; 20c.

Carter, T. W.—*Crude Oil Engines;* [2-cycle types; heavy engines of today; ignition and starting].—Petroleum World, Exhibn. No., Sept.,1912; p. 52; 1800 w; 45c.

Chorlton, A. E. L.—*A New Type and Method of Construction of Large Gas-Engines;* [Duplex type].—Iron & Steel Inst., Jnl.; Sept.,1912; 21 pp.*; 50c. Abstract in Electrician, Oct.4, p. 1075; 1800 w*; 35c. Also in Iron & Coal Trades Rev., Oct.4, p. 516; 3000 w*; 45c.

Clark, D., Hopkinson, B. —, and others.—*Fifth Report of the British Asso. Committee on Gaseous Explosions;* [Heat-flow from gas-engine working substance into cylinder walls; abstract].—Electrician, Oct.4, p. 1067; 2000 w; 35c.

Clerc, D.—*Note on the Gas Turbine;* [Read to Section G, Brit. Asso. Adv. Sci., Sept., 1912].—Engnrg., Sept.13, p. 367; 1200 w; 35c. Also in Electrician, Sept.13, p. 938; 2500 w; 35c.

Coster, A. Vennell.—*The Modern Gas Engine.*—Eng. (London), Nov.22,1912; p. 724; 3500 w*; 35c.

Coster, A. V.—*Combustion Engines for Driving Mining Machinery;* [Direct drive for fans by gas-engines].—Cassier's Mag., July,1912; p. 23-33*; 35c.

Czermak, A.—*Ueber die Wirtschaftlichkeit der diversen Grubenlokomotivförderungen mit besonderer Berücksichtigung des Ostrau-Karwiner Revieres;* [Efficiency comparison of combustion, compressed-air and electric haulage engines, especially in the Ostrau-Karwin coal field, Austria].—Montanist. Rundschau, Junel6,1912; pp. 589-594*; July1, pp. 638-642*; 75c.

Degenhardt, W. R.—*Notes on Suction Producer-Gas Engine at the Yuanmi Gold Mines.*—W. Australia Chamber of Mines, Jnl.; June29,1912; p. 126; 2000 w*; 95c.

Didier, E.—*Le Moteur Diesel;* [The Dujardin type of Diesel motor].—Rev. Noire, Sept.1,1912; p. 405; Sept.15, p. —; 4000 w*; 50c.

Diefendorff, H. G.—*The Gasoline Engine, Marine and Stationary; Its Construction, Operation and Care.*—Detroit,1912; 71 pp*; 75c (book).

Dreyfus, E. D.—*Commercial Value of the Illuminating-Gas Engine.*—Cassier's Mag., Aug.,1912; p. 128; 2700 w*; 35c.

Fernald, R. H.—*Status of the Gas-Producer and of the Internal-Combustion Engine in the Utilization of Fuels.*—U. S. Bur. Mines, Techn. Paper No. 9; 1912; 42 pp; 10c.
Abstract in Ind'l Engg., Aug.,1912; p. 56; 4500 w*; 35c. Also in Pract'l El'y & Engg., Aug., p. 648; 2100 w; 25c.

Gercke, M.—*Die neuere Entwickelung der Dampfturbine und des Dieselmotors in ihrer wirtschaftlichen Bedutung für die Elektrizitätswerke;* [The newer developments in the steam turbine and Diesel motor in their economic bearing on electric power production].—Technik & Wirtschaft, Aug., 1912; pp. 526-536*; 75c.

Gercke.—*Die neuere Entwickelung der Dampfturbine und des Dieselmotors in ihrer wirtschaftlichen Bedeutung für die Elektrizitätswerke;* [Newer development of the steam turbine and the Diesel motor and their influence on the electric power plant].—Technik & Wirtschaft, Aug.,1912; pp. 526-536*; 75c.

Goodale, S. L.—*Blast Furnaces as Gas Producers;* [Production and possibilities in utilization of CO gas].—Coal & Coke Op., Aug.22,1912; p. 115; 2400 w; 25c.

Gouvy, A.—*Epuration des gaz de hauts fourneaux;* [Purification of blast furnace gases].—Rev. de Métall'gie, Oct.,1912; pp. 771-798*; $1.15.

Haanel, B. F.—*Canadian Studies of Peat Fuel in Gas Producers and the Elimination of Tar in Producer Gas.* (Canadian Dept. of Mines Report; abstract).—Eng. News, Dec.5,1912; p. 1062; 6000 w*; 25c.

Haanel, B. F.—*The Peat Producer-Gas Power Plant at the Government Fuel-Testing Station, Ottawa, Canada.*—Amer. Peat Soc., Jnl., No. 2, 1912; p. 84; 200 w*; $1.35.

Haanel, B. F.—*Report on the Utilization of Peat Fuel for the Production of Power;* [Experiments at Ottawa government testing station].—Canada Dept. Mines, Mines Branch Paper No. 154; 140 pp.*; 50c.

Holland, W. H.—*Gasoline Engines in Mines;* [For pumping; fume elimination by removal along with the water].—Coal Age, Sept.21,1912; p. 405; 500 w; 20c.

Holzwarth, H.—*Ueber die Gasturbine;* [Review of the gas turbines].—Jnl. f. Gasbeleuchtg., Sept.28, p. 949-956*; 50c.

King, F. F.—*The Use of Gasoline Motors in Coal Mines;* [Advantages and disadvantages].—Coal Trade Bull., Aug.15,1912; p. 38; 1500 w; 25c.

King, A. F.—*Gasoline Motors in Mines;* [Advantages and disadvantages of gasoline haulage-locomotives; read to W. Va. Coal Mng. Inst.].—Mines & Minerals, Sept., 1912; p. 75; 2400 w*; 35c.

Kirschke, A.—*Gas and Oil Engines.*—London, 1912; 168 pp.*; $1; (book).

Kirschke, A.—*Gas and Oil Engines. A Concise Account of the Most Important Types.*—London, 1912; 168 pp; $1.25 (book).

Kriegwr, A. O.—*The Use of Oil as Fuel.*—Eng. News, Nov.21,1912; p. 978; 2000 w; 25c.

Lane, F.—*Solution of the Question of Fuel for Diesel Engines.*—Petroleum World, Sept.,1912; p. 376; 1800 w; 35c.

Lescarboura, A. C.—*Some Recent European Gas Engine Plants;* [at mines and metallurgic works].—Power, Aug.27,1912; p. 300; 500 w*; 15c.

Lewis, R. M.—*Producer-Gas Power Plants.*—Mng. & Engg. Rev., Oct., p. 45; Nov., p. —; 4000 w; 50c.

McDonald, H. T.—*The Saurer Motor Hauling Ore;* [Tests in sand wash districts near Tucson, Ariz., for Pioneer Smelting Co.].—Mining & Engg. World, July27,1912; p. 152; 600 w; 10c.

Messinger, F.—*Das Steinkohlengas im Kampf gegen die Verschwendung des National vermögens;* [The gas producer and coal gas in the fight against dissipation of national resources].—Oldenberg, Germany; 1912; 138 pp.; 120 figs.; $1.50; (book).

Metzler, R.—*Ueber ein neues Gasreinigungsverfahren;* [New gas purifying process, especially blast-furnace gas for gas engines; read to Bergmannstag, Vienna, 1912; abstract].—Montanist. Rundschau, Sept.15, 1912; p. 950; 1000 w; 50c.

Moulton, S. A.—*A Comparison of Efficiencies and Costs of Steam, Water, Gas and Oil Power Generation;* [From report of Maine Water Storage Commission.—Engg. & Contractg., Sept.4,1912; p. 254; 12,000 w*; 20c.

Müller, W.—*Dampfmaschine, Dieselmotor, Elektromotor;* [Comparative costs of steam, Diesel-motor and electric drive].—Ton-Industrie Ztg., July2, p. 1055; 2000 w; 25c.

Neumann. — *Die Verbrennungskraftmaschine in der Erdölbohrindustrie;* [Use of combustion engines (oil and gas) in oil well drilling].—Organ d. Bohrtechniker, Oct.15, p. 233; 3600 w*; 45c.

Nougier, —. *Verbesserung von Verbrennungsmotoren durch Vorwämung der angesaugten Luft;* [Increasing the efficiency of combustion motors by preheating the air supply].—Gasmotoren Technik, May,1912; p. 34-36; June, pp. —; $1.

Nougier. — *Verbesserung von Verbrennungsmotoren durch Vorwärmung der angesaugten Luft;* [Improving combustion motors by preheating air supply].—Gasmotor. Technik, June,1912; July, p. 64-66*; $1.

Olafsen, O.—*Gas-Engine Valve Setting.*—Power, Sept.3,1912; p. 351; 1500 w*; 15c.

Ostertag, P.—*Die Entropie Diagramme der Verbrennungsmotoren einschliesslich der Gasturbine;* [The entropy diagrams of combustion engines, including gas turbines].—Berlin, 1912; 68 pp.; 17 figs.; $1; (book).

Perkins, F. C.—*Gasoline Industrial Locomotives;* [Some recent difficult installations].—Mines & Minerals, July,1912; p. 737; 1400 w*; 35c.

Phillips, S. U. and T. A. Ryan.—*Experiences in the Operation of Gasoline Engines in Mines;* [in pumps].—Coal Age, Oct.12, p. 503; 1000 w; 20c.

Pöhlmann, Ch.—*Neure Rohölmotoren;* [Newer types of crude oil motors (Diesel engines)].—Berlin, 1912; pp. —; 175 figs.; 8 plates; $3 (book).

Rath, —. *Teer und Teeröl als Treibmittel für den Dieselmotoren;* [Production of coal tar and tar oil in Germany, and their availability in the Diesel motor].—Glückauf, June22,1912; pp. 996-1005; 50c.

Rice, C. T.—*Gasoline Locomotive Underground;* [Desloge lead mines, Mo.].—E. & M. J., Oct.5,1912; p. 636; 500 w; 25c.

Rice, R. H.—*Relative Cost of the Turbine, Turbo-Compressor and the Gas En-*

gine; [Read to Amer. Soc. Mechl. Engrs.; abstract].—Iron & Coal Trades Rev., Nov.1, p. 716; 7000 w; 35c.

Rice, S.—*Gas-Engine Power for Mining and Metal Industries;* [Blast-furnace gas-engines in Germany and elsewhere].—Mining & Engg. World, Sept.7,1912; p. 425; 2500 w*; 10c.

Russell, P. H.—*Diesel Engine Design;* [11].—Mechl. World, July19,1912; p. 30; 1500 w*; 35c.

Sankey, H. R.—*Heavy Oil Engines.*—Roy. Soc. of Arts; Jnl.; Oct.4, p. —; Oct.11, p. 1047; Oct.18, p. 1065; Oct.25, p. 1083; 15,000 w*; 90c.

Sibley, R.—*Gas Engineering in American Universities.*—Jnl. of El'y Power & Gas, Sept.21,1912; p. 249; 7000 w*; 35c.

Smith, H. F.—*Notes on Producer-Gas Power;* [Chemical reactions and gas purification].—Western Soc. of Engrs., Jnl.; Sept. 1912; pp. 655-676*; 65c.

Strong, R. M., and Lawson, Stone.—*Comparative Values of Gasoline and Denatured Alcohol in Internal Combustion Engines.*—Pr. Elec. & Eng., Nov.,1912; p. 20; 3000 w; 15c.

Strong, R. M. and L. Stone.—*Comparative Fuel Values of Gasoline and Denatured Alcohol in Internal-Combustion Engines.*—U. S. Bur. Mines, Bull. 43, 1912; 243 pp*; 20c.

Thornton, W. M.—*Ignition of Gas by Electric Spark.*—Coal Age, Nov.23,1912; p. 722; 2000 w*; 20c.

Tupper, C. A.—*Blast-Furnace Gas-Engine Plant of 60,000 HP.;* [Europe's largest gas-engine power plant; at Deutscher Kaiser works].—Iron Age, Aug.29,1912; p. 458; 4000 w*; 30c.

Ulbright, T. C. and C. E. Torrance, jr.—*American Practice in Rating Internal Combustion Engines.*—Power, July23,1912; p. 121; July30, p. 153; 400 w*; 20c.

Whitman, R. B.—*Gas-Engine Principles.*—N. Y. and London, 1912; pp. xv, 248; 74 figs.; $1.75; (book).

Williams, A. D.—*Gas Engines at the Central Plant.* (Describes the plant of the Am. Steel & Wire Co. at Cleveland).—Power, Dec.3,1912; p. 825; 2000 w*; 20c.

Wickware, F. G.—*European Power Plant Practice;* [Tar oil as fuel for Diesel engines].—Practl. Engr., July1,1912; p. 669; 1200 w; 25c.

H. H. C.—*Modern Gas-Engine Design* (Part I).—Mech. World, Nov.15,1912; p. 231; 1500 w*; 15c.

J. G. W.—*Typical Analyses of Iron Blast Furnace Gases.*—Met. & Cheml. Engg., Nov., 1912; p. 713; 250 w; tables; 35c.

M. B.—*Le locomotive a motore a combustione "Oberursel";* [The "Oberursel" gasoline and combustion haulage locomotives].—Rassegna Mineraria, June1,1912; p. 307; 2000 w*; 35c.

Natnl. Electric Light Asso.—*Fuel Oil Production and Status of the Oil Engine in the U. S.;* [Report of "prime movers" committee].—Power, July9,1912; p. 51-53; tables; 2000 w; 15c.

———. *Browett-Lindley 4-Cylinder, Vertical Gas Engine.*—El. Rev. (London), July 19,1912; p. 118; 1000 w*; 35c.

———. *Design and Construction of a New Gas Engine;* [Cooper twin-tandem and horizontal single types].—Iron Trade Rev., July11,1912; p. 73; 2000 w*; 20c.

———. *Die Entzündung von Leuchtgas und von Methan durch plötzlich auftretende elektrische Funken;* [The ignition of illuminating gas and of methane by suddenly occurring electric sparks] (Translation from Iron & Coal Trades Rev. of lecture delivered before the Institute of Mining and Mechanical Engineers of the North of England).—Zts. des Zentral-Verbd. Bergbau-Betriebsl. Dec.1,1912; p. 737; 3000 w*; 45c.

———. *Dredges Operated by Oil Engines.*—Engg. News, Sept.12,1912; p. 468; 1800 w*; 25c.

———. *Elyria Oil Engine.*—Power, Aug. 27,1912; p. 301; 800 w*; 15c.

———. *Evolution of Motive Power in Anthracite Mines.*—Coal Age, Nov.23,1912; p. 719; 1000 w*; 20c.

———. *400-Brake-HP. 2-Cycle Gas-Engine;* [Constructed by Beadmore works, Glasgow, for Associated Portl. Cement Manfrrs., Ltd.].—Engnrg., Aug.30,1912; p. 287; 1000 w*; 35c.

———. *4-Cycle Vertical Gas-Engine;* [Browett, Lindley & Co. types].—Engnrg., Nov.8, p. 632, 633, 635; 1000 w*; 35c.

———. *Gas-Engine Generating Set at Barnsley Main Collieries.*—Iron & Coal Trades Rev., June14,1912; p. 965; 1000 w*; 35c.

———. *Gas Engines for the Railway Power Station, Kamata, near Yokohama;* [Lilleshall engines].—Engnrg., Sept.20, p. 385; 3000 w*; plates; 35c.

———. *Gas Engine Troubles.*—Mechl. World, July12, p. 17; 600 w; 35c.

———. *German Progress in Large Oil Engines.*—Power, Oct.22, p. 606; 1000 w*; 15c.

———. *Heat Flow in Gas-Engine Cylinders.*—Engg. News, Oct.3,1912; p. 614; 3600 w*; 25c.

———. *Junkers Oil Engine.*—Iron Age, Aug.1,1912; p. 244; 1500 w*; 30c.

———. *Largest British-Built Gas-Engine;* [Lilleshall engines for Yokohama-Tokio traction power plant].—Iron & Coal Trades Rev., July5,1912; p. 9; 500 w*; 35c.

———. *"New Century" Mine Locomotives.*—Iron & Coal Trades Rev., Aug.30, 1912; p. 314; 600 w*; 35c. Also in Coll'y Guardn., Sept.6, p. 485; 600 w*; 35c.

———. *Petrolmotoren für elektrische Zentralanlagen;* [Oil engines for electric central stations].—Kohle & Erz, Sept.2, 1912; p. 907; 1800 w; 35c.

———. *Portable Oil-Motor and Air-Compressor;* [Broom-Wade system].—Engnrg., Sept.13,1912; p. 367; 300 w*; 35c.

———. *Some Details of the Cooper Twin-Tandem Gas Engine.*—Power, Oct.15, p. 563; 1200 w*; 15c.

———. *Suction Gas Engines at the Hampden Gloucurry Mines, Queensland.*—Australian Mng. Standd., Aug.29,1912; p. 208; 2000 w*; 35c.

———. *Suggested Economies in Mine Hoisting;* [Light gasoline motor for small mines].—Mining & Engg. World, Aug.10, 1912; p. 246; 300 w; 10c.

———. *The Holzwarth-Junghans Gas Turbine.*—Iron & Coal Trades Rev., May31, 1912; p. 873; 500 w*; 35c.

———. *The Largest Suction Gas-Engine Power Station in South Africa;* [at Rooiberg tin mines].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 159; 1000 w*; $1.

———. *The "Otto" Petrol Locomotives for Mines.*—Mng. Engg., Oct.1912; p. 173; 1200 w; 35c.

———. *The Otto Crude Oil Engine.*—Amer. Fertilizer, Nov.2, p. 50; 1200 w*; 25c. Also in Oil Age, Nov.8, p. 6; 1200 w*; 20c.

———. *330-Brake-Hp. Tandem Gas-Engine;* [Kynoch engine for Hampden Cloncurry copper mines, Queensland].—Engnrg., June14,1912; pp. 799-802; 2000 w*; 35c.

———. *Ueber die neuren Fortschritte und Erfahrungen in der technischen Verwendung der Teerprodukte für Heiz-, Kraft-, und Lichtzwecke;* [Recent progress and experiences in the technical application of tar products for fuel, power and lighting purposes; read to Ver. Deu. Chemiker, May-June,1912; brief abstract with discussion, in]—Chemiker Ztg., June6,1912; p. 640; 600 w; 35c.

STEAM AND STEAM ENGINES

van Arsdale, G. D.—*Electrolytic Treatment of Water;* [Purifying boiler feed].—E. & M. J., July13,1912; p. 69; 1500 w; 25c.

Attick, W. J.—*Compression in Engine Cylinders.*—Power, July30,1912; p. 140; 2700 w*; 15c.

Basch, E. E.—*Speisewasserreinigung und Permutitverfahren;* [Feedwater purification and the permutite process].—Chemiker Ztg., July6,1912; p. 769; 3000 w; 35c.

Bernewitz, M. W. von.—*Power at the Waihi Mills, N. Z.;* [Waihi and Waikino; gas-engines and steam].—M. & S. P., Nov. 9, p. 591; 700 w*; 20c.

Blackwell, H. C.—*Surface Combustion;* [Read to Iowa District Gas Asso.].—Cheml. Engr., Sept.,1912; p. 91; 1200 w*; 35c.

Blau, E. — *Turbo-Kesselspeisepumpen;* [Centrifugal boiler-feed pumps].—Kohle & Erz, Oct.28, p. 1130; 1000 w*; 35c.

Blau, E.—*Die Verwendung der Dampfturbinen bei Hauptschachtförderanlagen;* [Use of steam turbines at mine hoisting plants in Germany].—Dingler's Polyt. Jnl., June22,1912; 6 pp*; 50c.

Boehm, Wm. H.—*Steam Boiler Explosions;* [Causes].—Power, Oct.8,1912; p. 548; 2100 w; 15c.

Brosius, F. R.—*Running a Steam Turbine.*—Power, Aug.20,1912; p. 248; 4000 w; 15c.

Caldwell, P. S.—*Compound Steam Engines;* [Read to Scottish Fed. Inst. of Mng. Students, W. branch].—Iron & Coal Trades Rev., Aug.23,1912; p. 269; 3000 w*; 35c.

Cary, A. A.—*Mistakes in Testing Boilers.*—Iron Age, Oct.10, p. 831; 2500 w; 30c.

Cary, A. A.—*Refined Apparatus for Boiler Testing.*—Iron Age, Oct.17, p. 900; 4000 w*; 30c.

Christie, A. G.—*Altitude and Steam Power Plant Economy.*—Power, Oct.8,1912; p. 525; 2800 w; 15c.

Chorlton, F. O. L.—*Governing of Steam Turbines.*—Engnrg., June14,1912; p. 815; 750 w; 35c.

Clayton, J. P.—*A New Analysis of Indicator Cards.*—Power, June18,1912; p. 858; 4500 w*; 15c.

Collins, G. A.—*The Operation of Steam Plants at Metal Mines.*—Mining & Engg. World, Aug.24,1912; p. 346; 1000 w; 10c.

Collins, H. E. and E. F. Williams.—*Shaft Governors.*—Power, Aug.27,1912; p. 294; 2000 w; 15c.

Courthope, T. F.—*A Modern Power Plant;* [Turbine generators and power distribution at Acadia Coal Co., N. S.].—Canadian Mng. Jnl., Sept.15,1912; p. 613; 3000 w*; 35c.

Dales, J. H.—*Boiler Practice and Fuel Economy.*—Eng. Rev. (London), Nov.15, 1912; p. 166; 2000 w; 35c.

Edsall, H. J.—*Boilers With and Without Conveyors;* [Economies of overhead bin conveyor system].—Power, Aug.6,1912; p. 183; 1500 w*; 20c.

Edwards, G. E.—*Zimmerman Mine of the Spring Valley Iron Co.;* [Palatka, Mich.; includes notes on steam hoists].—Mining & Engg. World, Aug.17,1912; p. 277; 1500 w*; 10c.

Edwards, Geo. E.—*Exhaust Steam Turbine at the Republic Mine, Michigan.*—Mining & Engg. World, June29,1912; p. 1357; 1000 w*; 10c.

Eichholtz, A. — *Moderne Kesselbekohlungsanlage;* [Some modern coaling plants in large boiler houses].—Polytechnikum, No. 16, 1912; pp. 190-195*; 65c.

Ellis, C.—*Flameless Combustion;* [With discussion by Lucke, Kent and others; principally on Bone and Lucke patents, and use of coke oven and explosive-gas mixtures].—Amer. Inst. Mng. Engrs., Bull. 69; Sept., 1912; pp. 945-977*; $1.15.

Eyermann, W. H.—*The Eyermann Steam Turbine;* [from Kraftmaschinenbau].—Power, Sept.17,1912; p. 410; 1800 w*; 15c.

Field, A. B.—*Operating Characteristics of Large Turbo-Generators.*—Amer. Inst. Electr. Engrs., Proc.; June,1912; pp. 963-974*; $1.15.

Fischer, W. F.—*Steam Power Plant Pipe Fittings,*—Power, Oct.29, p. 633; Nov. 5, p. 674; 2100 w; 20c.

Fischer, Wm. F.—*Steam Power Plant Piping Materials.*—Power, Oct.1, p. 512; 1800 w*; 15c.

Frantz, G.—*Ueber den Zweck einer Kondensations-Anlage;* [The function of a condensing plant].—Oberschles. Berg- & Hüttenm. Ver., Zts.; Sept.,1912; pp. 414-419; 45c.

Gaab, —. *Speisewasservorwärmer hinter Hochofengas- und Abhitze-Kesseln;* [Preheating boiler feed water for boilers using blast-furnace gas or waste-steam heat].—Stahl & Eisen, May23,1912; pp. 860-862*; 75c.

Geiseler, —. *Die neue Bauart des Niclausse-Kessels;* [The new Niclausse boiler].—Ver. Deu. Ingr., Zts.; May18,1912; pp. 777-781*; 75c.

Gercke, M.—*Die neuere Entwickelung der Dampfturbine und des Dieselmotors in ihrer wirtschaftlichen Bedeutung für die Elektrizitätswerke;* [The newer developments in the steam turbine and Diesel motor in their economic bearing on electric power production].—Technik & Wirtschaft, Aug.,1912; pp. 526-536*; 75c.

Gercke.—*Die neuere Entwickelung der Dampfturbine und des Dieselmotors in ihrer wirtschaftlichen Bedeutung für die Elektrizitätswerke;* [Newer development of the steam turbine and the Diesel motor and their influence on the electric power plant].—Technik & Wirtschaft, Aug.,1912; pp. 526-536*; 75c.

Gibson, G. H.—*Increasing Steam Boiler Efficiency;* [Heat absorption from the gases of combustion; Green fuel economizer].—Iron Age, Sept.26,1912; p. 720; 2700 w*; 30c.

Godbeer, S.—*Formulae Connecting the Pressure and Temperature of Saturated Steam.*—Engnrg., Aug.30,1912; p. 251; 1000 w; 35c.

Guillery, C.—*Feuerlose Lokomotiven;* Fireless steam locomotives in mines].—Montanist. Rundschau, Sept.15,1912; p. 942; 1000 w*; 50c.

Heck, R. C. H.—*The Steam Engine and Turbine; A Textbook for Engineering Colleges.*—London, 1912; $6 (book).

Heck, R. C. H.—*Losses in the Steam Cylinder.*—Power, Nov.5, p. 664; 2500 w*; 15c.

Heck, R. C. H.—*Limiting Efficiencies of Steam Plant;* [Relation between temperature of feed water at exhaust and steam consumption of main engine].—Power, July 2,1912; p. 2; 2000 w; 15c.

Hempel, —. *Dampfkesselschäden durch ölhaltiges Wasser;* [Injuries to boilers from oil-bearing water].—Kali Erz. & Kohle, Aug.25,1912; p. 843; 1000 w; 35c.

Hoefer, —. *Dampfturbinenkraftanlagen auf Berg- und Hüttenwerken in Rheinland-Westfalen, Belgien, Nordfrankreich und England;* [Steam turbine power plants at mines and metallurgic works in Rhine-Westphalia, Belgium, North France, and England].—Zts. f. Turbinenwesen, Oct.10, pp. 437-442*; 50c.

Hoffman, P.—*Running a Steam Turbine;* ["Power" prize turbine article].—Power, Aug. 6; 1912; p. 176; 6000 w; 15c.

Howard, O. Z.—*The Quality of Steam in Boilers;* [Methods of estimating].—Power, July9,1912; p. 46; 1500 w; 15c.

Jacquier, G.—*Purification Treatment of Water for Steam Boilers;* [Luminator system].—S. Afr. Mng. Jnl., July13,1912; p. 743; 600 w; 35c.

Johnson, F. L.—*Heating Surface, Boiler Horsepower;* [Computations for horizontal return-tubular boilers].—Power, July2,1912; p. 7; 1500 w; 15c.

Kershaw, J. B. C.—*Boilers and Boiler Control.*—London, 1911; 59 pp; 75c (book).

Knesche, J. A.—*Steam Meters.*—Eng. Mag., Dec., 1912, p. 393; 2500 w*; 35c.

Knesche, J. A.—*Steam Consumption Computations.*—Power, Nov.12, p. 707; 3000 w; 15c.

Kolb, A., and K. Braungard.—*Ueber Wasserreinigung und Kesselsteinbekämpfung;* [Water purification and the permutite process; discussion].—Chemiker Ztg., Oct.3, p. 1153; 5000 w; 35c.

Krauss, —. *Die Krafterzeugung in Gaswerken;* [Obtaining the maximum effect from low-grade fuels in gas works; turbo-generators run by waste heat].—Jnl. f. Gasbeleuchtg., Sept.14, pp. 901-905; Sept. 21, pp. 925-932*; 75c.

Kreisinger, H. and W. T. Ray.—*The Transmission of Heat into Steam Boilers.*—U. S. Bur. Mines, Bull. 18; 1912; 180 pp*; 10c.

Kreutzkopf, —. *Steam Consumption Calculations.*—Mechl. World, July19,1912; p. 30; 1400 w; 35c.

Leese, J. S.—*Some Old English Power Plants.*—Power, July23,1912; p. 108; 1200 w*; 20c.

Leese, J. S.—*Mixed-Pressure Turbine Installation.*—Power, Oct.22, p. 602; 1800 w*; 15c.

Lent, L. B.—*Burning Natural Gas under Boilers.*—Power, Oct.22, p. 597; 1000 w; 15c.

Leslie, J.—*Engine Foundation.*—Mech. Wld. London), Nov.29,1912; 2000 w*; 25c.

Letcher, O.—*South African Power Supply Projects;* [Discusses development of Victoria Falls & Transv. Power Co.].—E. & M. J., June22,1912; p. 1235; 2400 w; 25c.

London, W. J. A.—*The Steam Turbine;* [Correct piping for proper alignment].—Practl. Engr., Oct.15, p. 1027; 1600 w*; 25c.

London, W. A.—*Setting Up Turbines;* [Proper foundation and alignment].—Practl. Engr., Sept.1,1912; p. 875; 1800 w*; 25c.

Lyford, O. S., and R. W. Stovel.—*Steam Power Plants;* [Cost factors for steam turbo-electric generating plant].—Coal Mng. Inst. of Amer., Proc. for 1911; 1912; pp. 231-250.

Marks, L. S.—*Low-Pressure Steam Tables.*—Power, July16,1912; p. 80-83; 15c.

Marsh, T. A.—*Study of Draft Losses in Horizontally Baffled Boilers.*—Ind'l Engg., Sept.,1912; p. 101; 800 w*; 25c.

Morison, D. B.—*Steam Regenerative Accumulators;* [Read to Instn. of Engrs. & Shipbuilders, Scotland; abstract].—El. Rev. (London), Sept.6,1912; p. 369; 2000 w*; 35c.

Moulton, S. A.—*A Comparison of Efficiencies and Costs of Steam, Water, Gas and Oil Power Generation;* [From report of Maine Water Storage Commission].—Engg. & Contractg., Sept.4,1912; p. 254; 12,000 w*; 20c.

Müller, W.—*Dampfmaschine, Dieselmotor, Elektromotor;* [Comparative costs of steam, Diesel-motor and electric drive].—Ton-Industrie Ztg., July2, p. 1055; 2000 w; 25c.

Peebles, J. C.—*Furnace Efficiency; Combustion and Flue Gases.*—Practl. El'y, Sept.,1912; p. 698, Oct., p. —; 5000 w*; 50c.

Peebles, J. C.—*Thermometers for the Steam Plant.*—Power, Oct.29, p. 638; 1800 w*; 15c.

Perkins, F. G.—*Changing Steam Hoist to Electric Drive.*—Mining & Engg. World, Sept.21,1912; p. 535; 250 w*; 10c.

Perkins, F. C.—*Steam Fireless Locomotive;* [German type].—Coal Age, Aug.24, 1912; p. 257; 1000 w*; 20c.

Perkins, L. B.—*Perkins Tables; Calculations for Safe Working Pressure on Boilers.*—Hartford, Conn.; 1912; 360 pp; $5 (book).

Pietrkowski.—*Die Kesselbekohlanlage der Zeche Zollern II der Gelsenkirchener Bergwerks A-G;* [Firing equipment at Zollern No. 2 colliery boiler-plant, Gelsenkirchen; 35 tons hourly using only 1 man].—Ger. Deu. Ingr., Zts; July20,1912; p. 1164-1168*; 75c.

Pradel, —. *Moderne Dampfkesseleinmauerung;* [Modern walling installation of boilers].—Zts. f. Dampf. Betrieb., Aug.30, pp. 365-368*; 50c.

Pradel.—*Ein neues Verfahren zur Verfeuerung von Braunkohlen und Braunkohlenbriketts;* [New Lochner furnace for firing lignite and lignite briquets].—Braunkohle, July5,1912; p. 209-210*; 45c.

Reynolds, P. E.—*High Vacuum with Surface Condensers.*—Power, Nov.19, p. 738; 1200 w*; 15c.

Rice, C. T.—*Routine of Joplin Hoisting Practice;* [Rapid steam hoisting and electric from shallow depths].—E. & M. J., Sept.14,1912; p. 491; 1600 w; 25c.

Rice, R. H.—*Relative Cost of the Turbine, Turbo-Compressor and the Gas Engine;* [Read to Amer. Soc. Mechl. Engrs.; abstract].—Iron & Coal Trades Rev., Nov. 1, p. 716; 7000 w; 35c.

Rimmer, E. P.—*Boiler Explosions, Collapses and Mishaps.*—London, 1912; $1.50 (book).

Rogers, W. E.—*Notes on Renewing Tubes in Babcock and Wilcox Boilers;* [From Electrical Review].—Mng. & Engg. Rev., May,1912; p. 332; 1000 w; 35c.

Schapira. — *Ueber Abdampfverwertung;* [Steam regenerators and exhaust utilization in 2-stage turbines; Schwarz system].—Turbine, Aug.5,1912; p. 389-395*; 50c.

Schapira, —. *Neuere Tositurbinen;* [Newer types of Tosi turbines].—Turbine, Oct.5, pp. 6-10*; 50c.

Schneider, L.—*Die Abwärmeverwertung im Kraftmaschinenbetrieb;* [Utilization of waste and exhaust heat in steam power plants].—Berlin, 1912 (2d edition); 162 pp*; 118 figs; $2.50 (book).

Schulz, M. R.—*Ueber Economiser;* [Steam economizers].—Berlin, 1912; 46 pp*; $2.50 (pamphlet).

Schulz, W.—*Eine neue Kohlenstaubfeuerung für Dampfkessel;* [The Bettington process of coaldust firing for tubular boilers].—Tech. Blätter, Sept.28, p. 305; 3000 w*; 35c.

Schulz, —. *Ueber Leistungsfähigkeit der verschiedenen Ekonomiserarten;* [Efficiencies of the various steam economizers].—Zts. f. Dampf. Betr., Sept.6, pp. 373-376; 50c.

Scott, E. K.—*The Layout and Erection of Power-House Plant;* [Read to Jnr. Instn. of Engrs.; abstract].—Iron & Coal Trades Rev., July5, p. 13; 7000 w*; 35c. Also in Mechl. World, Sept.20,1912; p. 139; 2400 w*; 35c.

Seeber, R. R.—*Mine Hoisting Systems Compared;* [Steam vs. other power; criticizes Nordberg's paper].—E. & M. J., Aug. 3,1912; p. 197; 1300 w; 25c.

Sehmer, E. G.—*Steam Engines for Driving Reversing Rolling Mills.*—Iron & Coal Trades Rev., Aug.16,1912; p. 240; 750 w; 35c.

Staley, J. J.—*The Action of an Exhaust Steam Injector.*—Sci. & Art of Mng., Nov. 9, p. 163; 500 w*; 35c.

Streeter, R. L.—*Power Machinery of the American Steel Industry; III: Rolling-Mill Engines.*—Engg. Mag., Oct.,1912, pp. 16-35*; 35c.

Strobridge, R. L.—*Centrifugal Pumps for Condensers.*—Power, Oct.1,1912; p. 483; 1800 w*; 15c.

Stromeyer, C. E.—*Oil Fuel and Boiler Corrosion;* [Relative economies of oil engines, oil fuel, and coal-fired steam engines; report of Manchester Steam Users' Asso.].—Iron & Coal Trades Rev., Nov.1, p. 706; 1100 w; 35c. Also in Electrician, Nov.1, p. 133; 4000 w; 35c. Also in Coll'y Guardn., Nov.8, p. 942; 2000 w; 35c.

Swingle, C. F.—*Calculating Steam Consumption;* [From indicator diagram].—Practl. Engr., Oct.1,1912; p. 978; 1000 w*; 25c.

Sykes, S. W.—*Power Consumption of Hoisting Plants;* [Relative economies of electricity, steam and air].—Mines & Minerals, Aug.,1912; p. 49; Sept., p. —; 6500 w*; 65c.

Taudevin, E. P.—*Natural-Draft Gas Furnaces;* [Lecture before Glasgow & W. of Scotland Technical Inst.].—Iron & Coal Trades Rev., July12, 1912; p. 54; 2200 w*; 35c.

Terman, J. E.—*Flue-Gas Analysis for Beginners;* [Orsat apparatus]. — Power, Sept.10,1912; p. 380; 1500 w*; 15c.

Uehling, U. E.—*Combustion of Coal in Relation to Steam Boiler Efficiency;* [Read to Ohio Soc. of Mechl. etc. Engrs.].—Practl. Engr., Aug.1,1912; p. 763; 2700 w; 25c.

Wakeman, W. H.—*Condensers for Steam Engines* (fourth article).—Pr. Elec. & Eng., Nov.,1912; p. 6; 1200 w*; 15c.

Wakeman, W. H.—*Condensers for Steam Engines.*—Practl. El'y, Sept.,1912; p. 696; Oct., p. —; Nov., p. —; 3000 w*; 75c.

Walker, M. A.—*Fuel Economy at Colliery Boiler Plants;* [Devices at various American plants].—Coal Age, June22,1912; p. 1202; 2100 *; 20c.

Wangemann, —. *Flammenlose Gasfeuerung;* [Flameless combustion of gases].—Centralbl. d. Hütten & Walzwerke, July25, 1912; p. 391; 1200 w; 35c.

Weir, Wm.—*Development in Auxiliary Units Between Exhaust-Pipe and Boiler;* [Read to Instn. of Engrs. & Shipbuilders in Scotland].—Engnrg., Nov.8, p. 657; 4500 w*; 35c.

Wintermeyer.—*Anfahrregler für Dampfördermaschinen;* [Starting control for steam hoists].—Bergbau, Oct.10, p. 573; 2000 w*; 35c.

Wright, C. H.—*Electrical Transmission for Mining and Other Purposes in the Maritime Provinces, Canada.*—Jnl. Mg. Soc., N. S., Vol. XVII, 1912; p. 45; 6 p; 50c.

"Engine Driver."—*Steam vs. Electric Hoists;* [Safety and driving].—S. Afr. Mng. Jnl., Sept.28, p. 119; 2000 w; 35c.

———. *A New Low-Pressure Turbine Installation;* [Mixed-flow Rateau-Smoot type at Illinois Steel Co. works].—Iron Trade Rev., July25,1912; p. 165; 1200 w*; 25c.

———. *A New Small Steam Turbine;* [De Laval Class-C type, with velocity stages].—Iron age, Aug.22,1912; p. 400; 1800 w*; 30c.

———. *A New Type of Cooling Tower.* —Mg. & Eng. Rev., Nov.5,1912; p. 61; 1000 w*; 35c.

———. *A New Type of Superheater;* [Heine system].—Iron Age, Sept.14,1912; p. 592; 1000 w*; 30c.

———. *An Old Cornish Pumping Engine;* [Shipley colliery near Derby].—Iron & Coal Trades Rev., Aug.23,1912; p. 278; 600 w*; 35c.

———. *Appareils à vapeur; Accidents survenus en* 1911; [Steam engines and apparatus in Belgium, accidents in 1911].—Annales d. Mines Belgiq., Vol. 17, No. 3; 1912; p. 837-848; 90c.

———. *Automatic Stoking in the Boiler House of the Mines de Dourges Co., France;* [Bennis stoker and compressed-air furnace].—Iron & Coal Trades Rev., July5, 1912; p. 4; 2000 w*; 35c.

———. *Bennis Boiler Furnace for Mechanical of Gas Firing.*—Engnrg., Nov.1, p. 617; 500 w*; 35c.

———. *Cleaning Oily Waste;* [Use of oakite at Leadwood mill, southeast Missouri].—E. & M. J., July6,1912; p. 15; 750 w*; 25c.

———. *Coal and Ash Handling at Sioux City.*—Power, July9,1912; p. 38; 750 w*; 15c.

———. *Cost of Steam Raising at Sherwood Colliery, Notts.*—Iron & Coal Trades Rev., May24,1912; p. 846; 500 w; 35c.

———. *Efficiency of Nozzles and Guide Blades in Steam Turbines.*—Engnrg., July 19,1912; p. 94; 900 w*; 35c.

———. *Efficiency of Superheated-Steam Boilers.*—Engnrg., Oct.11, p. 513; 400 w; 35c.

———. *Einmauerung von Dampfkesseln;*

[The walling-in of boilers].—Kohle & Erz, Sept.16,1912; p. 958; 1800 w; 35c.

———. *Ein Turbogenerator von 21,500 KVA.;* [21,500 KVA. turbogenerator at Essen, Germany].—Glückauf, Oct.26, p. 1773; 300 w*; 45c.

———. *Engines, Machinery and Boilers in the Union;* [From Mines Dept. report for 1911].—S. Afr. Mng. Jnl., Sept.21, p. 92; 2000 w; tables; 35c.

———. *Heat Transmission Through Conducting Surfaces;* [Notes on reduction of heat-conducting surface per hp. in boilers].—Met. & Chemi. Engg., July,1912; p. 438; 2000 w*; 35c.

———. *How the Penn Mary Doubled Its Power Capacity;* [Heilwood, Pa.; utilization of waste heat and excess power].—Coal Age, Nov.2, p. 606; 2200 w*; 20c.

———. *Interesting Boiler-House Installation at a French Colliery;* [Bennis stokers and self-cleaning furnaces, Buttner water-tube boilers, etc.].—Coll'y Guardn., Oct.4, p. 686; 1500 w*; 35c.

———. *Neuere Oelfeuerungen für Dampfkesselanlagen;* [Newer oil vaporizers and burning equipment for boiler plants].—Elektrotechn. Anzeiger, July18,1912; p. 727-729*; 45c.

———. *Nordberg Uniflow Engine, Corliss Type.*—Pr. Elec. & Eng., Nov.,1912; p. 8; 1200 w*; 15c.

———. *Power Plant of Ore Washery.*—Ir. Age, Nov.21,1912; p. 1206; 1000 w*; 30c.

———. *Producer-Gas for Steaming Purposes;* [Terbeck flame].—Coal Age, July20, 1912; p. 81; 1000 w*; 20c.

———. *Surface Combustion;* [Discusses Bone's work and earlier work of Prof. C. E. Lucke of Columbia].—Met. & Chemi. Engg., July,1912; p. 409; 1500 w*; 35c.

———. *"Syphonia Rapids" Vacuum Steam Trap.*—Iron & Coal Trades Rev., Aug.23, 1912; p. 281; 500 w*; 35c.

———. *The Danger of Water Hammer;* [Abstract of report on boiler explosion at a Yorkshire colliery].—Coll'y Gnardn., May 21,1912; p. 1081; 1500 w*; 30c.

———. *The Economy and Curtis Steam Turbines.*—Practl. Engr., Aug.15,1912; p. 834; Sept. 1, p. —; 4000 w; 35c.

———. *The New Allis-Chalmers Corliss Engine.*—Power, Sept.17,1912; p. 412; 1200 w*; 15c.

———. *The Solignac-Grille Boiler.*—Power, June18,1912; p. 867; 1200 w*; 15c.

———. *The Speed Problem in Steam Turbine Design;* [Discusses new De Laval turbine].—Ind'l Engg., June,1912; p. 443; 5000 w*; 35c.

———. *The Spiro Steam Turbine.*—Coal Age, Sept.7,1912; p. 324; 500 w*; 20c.

———. *Untersuchung einer Abdampfturbine auf Zeche ver. Helene & Amalie;* [Tests of an exhaust-steam turbine plant used for air compression and hoisting at the Helene & Amalie colliery, Prussia].—Glückauf, July6,1912; pp. 1082-1084; 50c.

———. *Utilization of Electric Power for Iron Mining;* [in Lake Superior district; II: Economies of electricity over steam for hoisting].—Iron Trade Rev., Aug.1,1912; p. 203; 3000 w*; 20c.

———. *Vertical Curtis Steam Turbines;* [Setting up, aligning, and balancing].—Practl. Engr., Nov.15, p. 1129; 2100 w*; 20c.

———. *Water Purification in Power Plants.*—Coal Age, Sept.7,1912; p. 320; 2100 w*; 20c.

———. *Water Softening.*—Iron & Coal Trades Rev., Sept.27,1912; p. 465; 1800 w; 35c.

HYDRAULIC POWER AND MACHINERY.

See also Hydro-Electric under Electricity.

Dietz, C. F.—*The Blasius Theory of a New Hydraulic Ram;* [Discusses Abraham's hydropulsator; from "Stevens Indicator"].—Engg. Rev., July15, p. 6; 5000 w*; 35c.

Eilert.—*Der Kraftverbrauch von elektrischen und hydraulischen Hebezeugen;* [Power consumption of electric vs. hydraulic hoists].—Ver. Deu. Ingr., Zts; July 6,1912; p. 1061-1068*; 75c.

Lampl.—*Wahl einer Turbinen-Einheit;* [The selection of a turbine unit].—Turbine, Aug.5,1912; p. 395-398*; Aug.20, p. 412-414*; 75c.

Leunber.—*Ueber die Wahl der Wasserturbinengattung in zweifelhaften Fällen;* [Selection of water-turbine types in doubtful or puzzling cases].—Ver. Deu. Ingr., Zts; Aug.3,1912; p. 1244-2146; 75c.

London, W. A.—*Setting Up Turbines;* [Proper foundations and alignment].—Practl. Engr., Sept.1,1912; p. 875; 1800 w*; 25c.

Pfeifer, —. *Druckwasser Maschinen;* [Hydraulic machines].—SW. Deu. Industrie Ztg., Nov.2,1912; p. 645; 1300 w; 35c.

Rieger, S.—*Zur Wasserrechtsreform und Wasserkraftnutzung;* [Water rights and water-power development, and their effect on mining and metallurgy in the Alps and other parts of Austria].—Oestr. Zts. f. Berg- & H-wesen, May18,1912; p. 273; May 25, p. 288; June2, p. —; 6500 w; $1.

Smith, R. H.—*Waves in Long Hydraulic Pipes and Tunnels;* [From the London "Engineer"].—Canadian Engr., July4,1912; p. 112; 4000 w*; 25c.

Weber, W., and Hirschmann, W.—*Die Anwengung des Spülversatzverfahrens zu Abraumarbeiten in Braunkohlentagebaugruben;* [The application of the hydraulic stowing method to the disposal of waste in open-cut brown-coal mines], (reprint from Braunkohle). — Kohleninteressent, Nov.15, 1912; p. 278; 4400 w*; 35c.

"F. N. T."—*Pipes for Conveying Water under Pressure;* [Formulae]. — Mechl. World, Aug.16.1912; p. 79; 1000 w*; 35c.

———. *Presse hydraulique pour cintrer les chaneaux de boisage des galéries de mines;* [Hydraulic press for bending roof timbers in mine galleries]. — Portef. Economiq. d. Machines, 1912; pp. 93-96*; 75c.

———. *The new "Harmet" Fluid Compression Plant of the Nova Scotia Steel & Coal Co., Ltd., at Sydney Mines, N. S.;* [Fluid-compression of high-grade steels].—Canadian Mng. Jnl., Sept.15,1912; p. 620; 3500 w*; 35c.

———. *The New Steam-Hydraulic Forging Plant at the New Glasgow Works of the Nova Scotia Iron & Steel Co., Ltd.*—Canadian Engr., June27,1912; p. 859; 2500 w*; 25c.

———. *The Pelton Water-Wheel;* [Construction; calculation of power and speed].—Mines & Minerals, Sept.,1912; p. 97; 1200 w*; 35c.

———. *Turbinas espirales;* [Spiral turbines.—Madrid Cientif, Aug.15,1912; p. 485; 1000 w*; 35c.

PART III. MISCELLANEOUS.*

CHAPTER XVII.

SLAGS, TAILINGS, FINES, FUMES, SLUDGE, WATERS, ETC.

Argall, P. N.—*Milling Sulpho-Tellurides at Cripple Creek;* [Mining, milling and cyaniding the dumps].—Mex. Mng. Jnl., Nov., p. 27; 2400 w*; 25c.

Bacon, C. J.—*Methods of Cokedust Disposal;* [Yearly disposal of 50,000 tons of dust, and accumulation of 100,000 tons from by-product ovens].—Amer. Gas. Jnl., Vol. 96, 1912; pp. 376-7; 380-4*; 65c.

Banks, Chas. A.—*A Tailing Plant;* [Waihi-Paeroa 500-ton per day plant for cyaniding sands of Ohinemuri river outwashed from Waihi and Karangahake gold districts, N. Z.].—Mng. Mag., Aug.,1912; p. 121; 1500 w*; 45c.

Bartel.—*Die Verwendung geringwertiger Brennstoffe zur einheitlichen Versorgung Deutschlands mit elektrischer Energie;* [Use of low-grade fuels,—coal, lignite, and peat —for producing electric power in Germany; costs per kw.-hour.—E. T. Z., July11,1912; pp. 705-709*; 50c.

Bartmann, Dr.—*Die Einleitung von Grubenwasser und anderen gewerblichen Abwässern in Wasserläufe nach dem neuen Entwurf eines preussischen Wassergesetzes;* [The discharge of mine and industrial waters into streams, according to the new draft of the Prussian water laws].—Deu. Bergwerks Ztg., June8,1912; p. 3; 4000 w; 35c.

Baum, Bergassessor.—*Die Bergwerksanlage Admiral bei Hörde;* [The Admiral mining plant at Hörde].—Glückauf, Nov.30, 1910; p. 1951; 5000 w*; 50c.

Beckurts, H.—*Wissenschaftlichan Forungen über die Natrium- und Magnesiumsalze in den Gewässern des Elb- und Weserstromgebietes;* [Review of investigations of the salt and magnesia content of the waters of the Elb and Weser river basins, as influenced by the potash works].—Kali, July15,1912; p. 337-341; 45c.

Bennett, J. C.—*Costs of Levelling Dredged Ground at Oroville, Cal., with an Electric Drag Bucket-Scraper.*—Engg. News, Oct.17, p. 699; 1000 w*; 25c. Also in E. & M. J., Oct.26, p. 782; 800 w*; 25c.

Brown, Ev.—*Utilization of Blast Furnace Gas;* [Under boilers and in gas engines; fuel efficiency].Power, Oct.8,1912; p. 533; 1400 w; 15c.

Buskett, E. W.—*Cyanidation of the Granite-Bimetallic Tailings;* [Phillipsburg, Mont; 1,000,000 tons of $3 silver tailings].—Mining & Engg. World, Aug.17,1912; p. 283; 4500 w*; 10c.

Chase, Thorington.—*The World's Greatest Smelter.* (Description of the Washoe plant, Montana).—Mex. Mg. Jnl., Dec., 1912; p. 30; 6000 w; 25c.

Clark, Allan J., and Sharwood, W. J.—*Metallurgy of the Ores of the Homestake Mine, So Dakota.* (Bulletin 98, Inst. Mg. & Met.; abstract).—Mg. & Eng. World, Dec.7,1912; p. 1035; 5000 w; Dec.14,1912; p. 1090; 3000 w*; 20c.

Dean, Samuel.—*The Coal Dust Question.*—M. & M., Dec.,1912; p. 245; 3000 w*; 35c.

Drucker, A. E.—*Mining Plants of the Oriental Con., Unsan, Korea.*—M. & S. P., Nov.23,1912; p. 652; 2500 w*; 20c.

Edwards, W. W.—*Stacking Hydraulic Tailing;* [Novel use of monitors in Pine Creek hydraulic mines, Atlin, B. C.].—M. & S. P., Aug.24,1912; p. 243; 500 w*; 20c.

Feld, W.—*Centrifugal Gas Washer;* [Purification of blast-furnace and producer gases; recovery of metal dust from lead and copper smelter gases; tar from coke gases].—Met. & Cheml. Engg., July, 1912; p. 436; 2000 w*; 35c.

Fourmarier.—*Installation de mise à terril;* [Bee system of movable incline for waste disposal at Horloz colliery, Belgium]. Annales d. Mines (Belgiq.), Vol. 17, No. 4, 1912; pp. 1021-1025*; 65c.

Franke, G.—*Die neue Blende- u. Bleierzaufbereitung, Haldensturz- u. Wiederverladeanlage der Bleischarleygrube bei Beuthen;* [The new blende and lead-ore treatment, waste disposal and reloading plant of the Bleischarley mine at Beuthen].—Glückauf, Nov.30,1912; p. 1945*; 2600 (last part); 50c.

Franke, G.—*Die neue Blende- und Bleierzaufbereitung, Haldensturz- und Wiederverladeanlage der Bleischarleygrube bei Beuthen;* [The new blende and lead-ore treatment, waste-dump and reloading plant of the Bleischarley mine at Beuthen].—Glückauf, Nov.16,1912; p. 1865; 3900 w* (first part); Nov.23; p. 1906; 5800 w* (second part); $1.

Gradenwitz, Alfr.—*Mud Disposal in Blast-Furnace-Gas Purification;* [Clarification of water used].—E. & M. J., July6,1912; p. 27; 1000 w*; 25c.

Griffith, Wm., and Eli T. Conner.—*Difficulties Overcome in Mining Anthracite Coal.*—Bl. Diam., Nov.9,1912; p. 20; 2000 w*; 15c.

Hart-Davis, Hugh Vaughan.—*Emploi du Poussier de Charbon comme Combustible;* [The use of coal dust as fuel] (Abstract of communication to the Manchester Geological and Mining Society).—L'Echo de Mines, p. 1274; 900 w; 35c.

Hawley, F. G.—*Determining SO_3 in Flue Gas.*—E. & M. J., Nov.23,1912; p. 987; 2000 w; 25c.

Hoffman, Frederick L.—*Miners' Phthisis on the Rand* (first article).—E. & M. J., Nov.30,1912; p. 1035; 3500 w; 25c.

Huston, Geo.—*Siderite Tailings Valuable Materials for Road Building;* [in Coeur d'Alenes, Idaho].—Mng. Sci., Oct.24, p. 262; 1400 w; 20c.

*Includes Waste Disposition; Ore Genesis; Mining Geology; Law, Legislation and Taxation; Conservation; Government Ownership; Financial and Business Organization; Syndicalism; Historical; Filing and Indexing; Educational; Schools and Societies.

Jorgensen, F. F.—*Handling Rock and Waste in Iowa Coal Mines;* [Compares inclined tram and aerial cableways for culm piles].—Iowa Engr., Oct., p. 3-10*; 50c.

Kalmus, H. T.—*Conservation and Research;* [Waste and conservation in fuels, nitrates, iron and steel, smelter slags and fumes, etc.].—Science Conspectus, April, 1912; p. 152; 3200 w; 65c.

Knaff, A.—*Zur Frage des Schlackenbetons;* [The use of slag in concrete].—Ton Industrie Ztg., Oct.26, p. 1703; 1500 w; 35c.

Leggett, J. H.—*Reclaiming Dredged Land.*—M. & S. P., Oct.26, p. 527; 1000 w*; 20c.

Malcomson, Charles T.—*Briquetting Fine Coal at the Head of the Lakes.*—Bl. Dia., Nov.23,1912; p. 18; 3000 w*; 20c.

Maus, O.—*Anlage zur Beschickung eines Brikettlagerplatzes;* [Conveyor for stocking a briquet storage yard].—Ver. Deu. Ingr., Zts; No. 15, 1912; pp. 608-9*; 75c.

Meyer, Ferd. M.—*Neues Substanz zur Erhöhung der Festigkeit von Portlandzement;* [A new substance for increasing the strength of Portland cement].—Tonindustrie-Ztg., Nov.30,1912; p. 1883; 1500 w; 35c.

Olin, H. L.—*Coal Alteration at Lower Temperatures and the By-Products.* (Bull. No. 60, Eng. Exp. Sta., Univ. Illinois; abstract).—Mg. & Eng. World, Dec.14,1912; p. 1097; 750 w; 10c.

Parker, E. W.—*Fuel Briquetting in* 1911; [Developments and new plants in U. S.].—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 12 pp.; 10c. Abstract in Coal Trade Bull., Aug.1, p. 37; p. 43; 6000 w; 25c.

Parry, L.—*Systematic Treatment of Metalliferous Wastes;* [Lead, tin, antimony, copper, nickel and zinc].—London, 1912; 121 pp; $2 (book).

Parson, Chas. L.—*The Waste of Fertilizer Materials.* (Bull. Bu. of Mines; abstract).—Am. Fertilizer, Nov.30,1912; p. 48; 3000 w; 35c.

Parsons, C. L.—*Losses in the Concentration of Zinc Ores;* (Bulletin 47, U. S. Bur. Mines; abstract).—Mg. & Eng. World, Nov.23,1912; p. 956; 1100 w; 10c.

Passow, H.—*Hochofenzement;* Blast furnace Slag Cement; production and uses].—Berlin, 1912; 51 pp.; 75c; (pamphlet).

Peebles, J. C.—*Furnace Efficiency: Combustion and Flue Gases;* [Third article].—Pr. Elec. & Eng., Nov.,1912; p. 3; 1500 w; 15c.

Randall, John.—*Practical Cyaniding* (Part V).—M. & M., Dec.,1912; p. 270; 7000 w*; 35c.

Richards, Jos. W.—*The Volatilization of Metals.*—Am. Inst. Metals paper; 2 p.; 20c.

Richards, J. W.—*Treatment of Mine Water from the Ashio Copper Mine;* [For recovering copper and clarifying discharge].—Amer. Inst. of Mng. Engrs., Bull. 66; June,1912; pp. 655-658; 1000 w*; $1.15.

Weber, W., and Hirschmann, W.—*Die Anwengung des Spülversatzverfahrens zu Abraumarbeiten in Braunkohlentagebaugruben;* [The application of the hydraulic stowing method to the disposal of waste in open-cut brown-coal mines], (reprint from Braunkohle).—Kohleninteressent, Nov.15, 1912; p. 278; 4400 w*; 35c.

Wilson, H. M.—*Pollution of Streams By, and Re-Use of, Coal Washery Water;* [Read to Roy. Sanitary Inst., York].—Iron & Coal Trades Rev., Aug.2,1912; p. 160; 1200 w; 35c.

Zulch, W. G.—*Tailing Disposal Device at Colburn Mill;* [Bucket to dump at any point].—Mines & Minerals, July,1912; p. 748; 350 w*; 35c.

———. *Die Verschuldenfrage bei der Ableitung von Grubenwässern in öffentliche Flüsse;* [The damage-liability problem for the discharge of mine waters into public streams according to German laws].—Deu. Bergwerks Ztg., June8,1912; section 4, page 1; 1200 w; 35c.

———. *Precipitation of Copper from Mine Water at Butte.*—M. & S. P., Sept. 28,1912; p. 404; 700 w; 20c.

———. *Tailings Dewatering Wheel;* [at Rivermine, Mo., lead mills].—E. & M. J., Aug.31,1912; p. 399; 1000 w*; 25c.

———. *Timber Planting on Pit Banks and Waste Lands.*—Iron & Coal Trades Rev., Oct.11, p. 602; 1000 w; 35c.

———. *The Ophir Cyanidation Plant* (Nevada).—M. & S. P., Nov.30,1912; p. 703; 700 w; 20c.

———. *The Reduction of Slate Waste;* [Various uses].—Slate Trade Gazt., Oct., 1912; p. 168; 1600 w; 35c.

Stream Pollution

See also under Mine and Mining (Pumps; Mine and Mill Waters).

Briqueting

Grimshaw, R.—*Prüfen von Eisenerz Briketts;* [Testing of iron-ore briquets].—Centralbl. d. Hütten & Walzwerke, July5,1912; p. 353; 300 w; 35c.

Grahn, —. *Steinkohlenbrikettierung mit Naphthalinzusatz;* [The Schüring and Buss-Fohr processes of briketting coal with naphthalin binder].—Glükauf, Oct.26, p. 1764; 100 w*; 45c.

Grahn. — *Steinkohlenbrikettierung mit Naphthalinsusatz;* [Briketting of hard coals, using naphthalin binder].—Glückauf, Sept. 21,1912; p. 1536; 1200 w*; 45c.

Grimshaw, R.—*Briquetting Coal Dust.*—Coal Age, Sept.14,1912; p. 357; 300 w; 20c.

Hamilton, J.—*Progress in Preparation of Iron Ores.*—See under Iron Ores.

Mashek, G. J.—*Peat Briquetting.*—Amer. Peat Soc., Jnl; Apr.,1912; p. 10-16; $1.35.

Mehrtens, J.—*Die Verwendung von Eisen- und Metall-Spänen in der Giesserei;* [Use of briquetted iron and steel scrap in the foundry].—Centralbl. d. Hütten & Walzwerke, June5,1912; p. 292; 3000 w; 35c.

Messerschmidt, A.—*Briquetting of Cast-Iron Chips and Melting Them in Cupolas;* [from Stahl & Eisen].—Castings, July, 1912; p. 123; 1000 w; 25c.

Pollok, —. *Elektrischer Antrieb von Brikettpressen;* [Electric drive for briquetting presses; various equipments].—Braunkohle, Sept.13, pp. 373-382*; 50c.

Pradel.—*Ein neues Verfahren zur Verfeuerung von Braunkohlen und Braunkohlenbriketts;* [New Lochner furnace for firing lignite and lignite briquets].—Braunkohle, July5,1912; p. 209-210*; 45c.

Wangemann, P.—*Schnellbrikettierung;* [High-speed briquetting process under binder-system].—Centralbl. d. Hütten & Walzwerke, Oct.5, p. 522; 1500 w; 35c.

Weisskopf, Al.—*Fortschritte in der Brikettierung von Eisenerzen;* [Progress in

briquetting iron ores; read to Allgm. Bergmannstag, Vienna, Sept., 1912; abstract].—Montanist. Rundschau, Sept.15,1912; p. 957; 1800 w; 50c.

West, J. G.—*The West Sintering Process;* [Chiefly for iron-ore fines].—E. & M. J., Sept.7,1912; p. 459; 800 w*; 25c.

———. *Briquetting Bituminous Coal;* [Belgian roll-press machines on MacKay mine coal and slack, Nova Scotia].—Canadian Engr., Oct.10, p. 589; 700 w; 25c.

Gr.—*Pressen von Metallabfällen zu soliden Blöcken;* [Pression of metal scrap into solid blocks; Rony process].—Kohle & Erz, Sept. 16,1912; p. 954; 800 w; 35c.

———. *Briquette Plant for the Italian Navy;* [Johnson & Sons, Ltd., eggette plant].—Coll'y Guardn., May24,1912; p. 1033; 1000 w*; 30c.

———. *Briquetting Small Coal.*—Coal Age, Sept.7,1912; p. 322; 1000 w*; 20c.

———. *Coal Washing and Briquetting;* [No. 2 Hibernia Mine, Germany].—Mines & Minerals, Nov., p. 193; 1800 w*; 35c.

———. *Die Briketterzeugung in den hauptsächlichsten Gewinnungsländern;* [Coal briquet production in the principal countries, 1900-1911, with special reference to German districts, 1907-1911].—Glückauf, Nov.9, pp. 1852-1853; 800 w; tables; 50c.

———. *Early History and Present Status of the Coal Briquetting Industry.*—Coal Age, Sept.21,1912; p. 151; 400 w; 25c.

———. *The Denison-Korte Briquetting Machine for Metal Borings.*—Iron & Coal Trades Rev., Aug.23,1912; p. 279; 1000 w*; 35c.

———. *The Devillers Briketting Plant, Brooklyn, N. Y.*—Coal Age, Nov.16, p. 680; 500 w*; 20c.

———. *The German Lignite and Briquet Industry in* 1911.—Iron & Coal Trades Rev., July26,1912; p. 132; 1000 w; 35c.

———. *The Manufacture of Briquets;* [Requirements and costs].—Coal Age, Aug. 24,1912; p. 249; 500 w; 20c.

———. *Zur Brikettierung von Eisenerzen Humboldt system and developments in iron ore briketting and use of briketts.*—Erzbergbau, July15,1912; p. 233; 1500 w; 35c.

Waste Waters Disposition

See under "Waters; Pumping," etc. (Mine and Mining).

TRANSPORTATION; STORAGE; HANDLING

Behrend, —. *Erhöhung der Sicherheit und Leistung moderner Hebezeuge;* [Increasing the safety and output efficiency of modern cranes and lifting devices; Jordan brake].—Dingler's Polytechn. Jnl.; June15, 1912; 5 pp.*; 50c.

Berger, L.—*Chinas Bergbau, speziell seine Kohlen- und Eisen-industrie;* [China's mining, especially its coal and iron industry].—Technische Blätter, Nov.30,1912; p. 377; 2400 w*; 35c.

Blau, E.—*Kontrolle über Materialforderung und Materialverbrauch durch selbsttätige Wiegevorrichtungen;* [Mechanical control of the supply and consumption of crude materials by automatic weighing devices].—Kohle & Erz, Oct.11, p. 1012; 1200 w; 35c.

Christensen, C. C.—*Sectionalized Machinery for Inaccessible Regions.*—Mining & Engg. World, Sept.14,1912; p. 481; 1200 w*; 10c.

Clark, Allan J., and Sharwood, W. J.—*Metallurgy of the Ores of the Homestake Mine, So. Dakota.* (Bulletin 98, Inst. Mg. & Met.; abstract).—Mg. & Eng. World, Dec.7,1912; p. 1035; 5000 w; Dec.14,1912; p. 1090; 3000 w*; 20c.

Cole, A. A.—*The Relation of Transportation to Mining in Cobalt.*—Can. Mg. Jnl., Dec.1,1912; p. 795; 2000 w; 30c.

Davenport, L. D.—*Cutting a Station and Pocket in Ore.*—E. & M. J., Oct.19, p. 733; 800 w*; 25c.

Droege, J. A.—*Freight Terminals and Trains.*—New York and London; 1912; pp. vii, 465; 208 figs.; $5 (book).

Edlund, E. G.—*Ny kollossningskran i Malmö;* [New giant coal-unloading crane at Malmö harbor, Sweden].—Tekn. Tidskr., No. 24, 1912; p. 43-45*; 60c.

Edwards, Geo. E.—*Scientific Management on the Menominee Range;* [Describes the up-to-date methods of operation at the properties of the Munro Iron Mg. Co.].—Mg. & Eng. World, Nov.23,1912; p. 947; 4000 w*; 10c.

Eilert.—*Der Kraftverbrauch von elektrischen und hydraulischen Hebezeugen;* [Power consumption of electric vs. hydraulic hoists].—Ver. Deu. Ingr., Zts; July6,1912; p. 1061-1068*; 75c.

Eye, C. M.—*Pioneering in the Tropics.*—M. & S. P., Sept.21,1912; p. 370; 3000 w*; 20c.

Flachs, Dr.—*Benzintankwagen für Heereszwecke;* [Benzine auto tank car, especially for military purposes].—Allgm. Oestr. Chemiker Ztg., Nov.1, p. 163; 1800 w*; 45c.

Franke, G.—*Die neue Blende- u. Bleierzaufbereitung, Haldensturz- u. Wiederverladeanlage der Bleischarleygrube bei Beuthen;* [The new blende and lead-ore treatment, waste disposal and reloading plant of the Bleischarley mine at Beuthen].—Glückauf, Nov.30,1912; p. 1945*; 2600 (last part); 50c.

Gariel, M.—*Transporteur aérien des aciéries d'Imphy;* [Canal-barge unloading cranes and aerial cableway of the Imphy steel works, Nièvre, France].—Echo d. Mines, June6,1912; p. 666; 2000 w*; 50c.

Goodrich, H. C.—*Difficult Work on a Mine Railroad in Utah;* [Construction of Bingham & Garfield Ry.]—Engg. Record, Aug. 17, p. 184; 210 w*; 20c.

Hamilton, G. W.—*An Electric Haulage System.*—Coal & Coke Op., Nov.21,1912; p. 323; 2000 w; 20c.

Hawes, A. L.—*Electric-Crane Control Gear.*—Engg. Rev., Sept.,1912; p. 100; 3000 w*; 35c.

Heepke, W.—*Die Hebe- und Transportmaschinen;* [Lifting and Transporting Machinery and Appliances].—Leipzig, 1912; 246 pp.; 251 figs.; $1.75 (book).

Herberts, H.—*Ueber die Wahl eines Kranes;* [On the selection of a crane].—Fördertechnik, Aug.,1912; p. 177; 1500 w*; 45c.

Hermanns, H.—*Neuzeitige Transport- und Hebezeuge in Eisengiessereien;* [New suspended trolleys, lifting cranes and other transport and handling equipment in iron foundries; read to Ver. Deu. Giessereifachleute, May,1912].—Giesserei Ztg., June1, 1912; pp. 333-334*; June 15, pp. ——; 65c.

Hermanns, H.—*Neuere Eisenbahnwagenkipper;* [Newer railroad-car tipping devices. Demag types].—Dingler's Polyt. Jnl., July

13,1912; p. 440-442*; July 20, p. 454-456*; July27, pp. 472-477*; $1.

Hess, M. D.—*Machine Design: Hoists, Derricks, Cranes.*—N. Y. and London; 1912; pp. vi, 368; 18 plates; 318 figs.; $5 (book).

Horner, J.—*Overhead Travelling Cranes;* [Modern handling equipments in workshops].—Cassier's Mag., Sept.,1912; pp. 195-216*; 35c.

Irvin, Donald F.—*Disposal of Tailing at El Tigre, Sonora, Mex.*—M. & S. P., Dec.7, 1912; 727; 2500 w*; 20c.

Jessup, D.W.—*Underground Mine Switches.*—E. & M. J., Nov.30,1912; p. 1031; 3000 w*; 25c.

Jorgensen, F. F.—*Handling Rock and Waste in Iowa Coal Mines;* [Compares inclined tram and aerial cableways for culm piles].—Iowa Engr., Oct., p. 3-10*; 50c.

Kraus, Fr.—*Ueber die Berechnung der Gleichstrom-Elektromagnete;* [Computations for direct-current electromagnets].—Elektrotechnik & Masch. Bau., Oct.,20, p. 869-875*; 4800 w*; 35c.

Lindner, G.—*Wanddruck in Silos und Schachtöfen;* [Wall pressure in storage bins and shaft furnaces].—Berlin, 1912; 32 pp; 42 figs; $1 (book).

Linebaugh, J. J.—*A 2400-Volt Direct-Current Electric Railway at Butte, Mont.*—General El. Rev., Aug.,1912; p. —; 3000 w*; 50c. Abstract in E. & M. J., July6, p. 26; 1100 w; 25c. Also in Engg. News, Aug.15, p. 299; 600 w; 20c.

Löschner, S.—*Einige Grundformeln zur Berechnung der Förderleistung von Anlagen mit unterbrochenem Betriebe;* [Some basic formulas for computing output of cranes, etc., under intermittent operation].—Fördertechnik, July,1912; p. 145; 1200 w; 45c.

McIntyre, Wm., Jr.—*Battle Creek Coal Mine, Tennessee.*—M. & M., Dec.,1912; p. 237; 3000 w*; 35c.

Michenfelder, C.—*Neuere Krahnbauarten für Sonderzwecke;* [Some newer types of special-service cranes].—Ver. Deu. Ingr., Zts.; Oct.12,1912; 5 pp.*; 75c.

Michenfelder, C.—*Rationelle Krananlagen in Hüttenwerken;* [Rational crane equipment and setting-out in metallurgic works].—Centralbl. d. Hütten & Walzwerke, Aug. 25,1912; p. 450; 1600 w*; 35c.

Mill, J. C.—*Improvement Works in the Detroit River; New Canalized Channels.*—Cassier's Mag., July,1912; p. 34-48; 3500 w*; 35c.

Nicol, W. J.—*Device for Running Ore Passes;* [Chute cleaning].—Mng. & Engg. Rev., Oct.5, p. 15; 300 w*; 35c.

Ostrander, F. T.—*Distribution of Petroleum Products;* [Tank steamers and other methods].—Oil Age, Sept.6,1912; p. 6; 1800 w; 20c.

Pardill, J. O.—*Feed Gate for Coarse Ore.*—E. & M. J., Oct.19, p. 727; 350 w; 25c.

Rice, C. T.—*Calumet Rock Chute;* [Cast-iron gate-chute at Calumet & Hecla rock-house bins].—E. & M. J., July27,1912; p. 159; 400 w*; 25c.

Rice, C. T.—*Joplin Ore Bin Construction;* [In Missouri lead-zinc mills].—E. & M. J., June22,1912; p. 1232; 1500 w*; 25c.

Riggs, T.—*Surveying the 141st Meridian;* [Alaska-Canada arctic boundary].—Natnl. Geogr. Mag., July,1912; p. 685-713*; 35c.

Rosenthal.—*Die Ursache der Explosionen von Benzintanks und deren Verhütung;* [Causes of explosions in benzine tanks, and their prevention].—Chem. Industrie, July 15,1912; pp. 444-447*; 50c.

Schmitt, C. O.—*The Design and Construction of Reduction Plants;* (2) *The Transport of Materials;* [Rand Metallurgical Practice, Vol. II].—Johannesburg, London, and Philadelphia; 1912; 438 pp; 434 figs; $6.50 (book).

Semple, C. C.—*Transporting a Boiler in the Tropics.*—Power, Oct.15,1912; p. 556; 1200 w*; 15c.

Stratton, H. P.—*Anwendung des Hebemagnets in der Giesserei;* [Applications of the lifting magnet in the foundry].—Eisen Ztg., June15,1912; p. 433; June22, p. 455; 2400 w; 50c.

Urquhart, Charles H.—*The Black Oak Mill, Calif.*—M. & S. P., Nov.30,1912; p. 687; 3000 w*; 20c.

Wickware, Francis G.—*Steel Belts.*—Pr. Eng., Dec.1,1912; p. 1183; 1500 w*; 20c.

Williams, A. D.—*Gantry Coal Handling Crane;* [100-tons hourly capacity].—Power, Nov.12, p. 703; 800 w*; 15c.

Wintermeyer, —. *Neuere Gesichtspunkte beim Bau von Hebemagneten;* [Some new features in the construction of lifting magnets].—Elektrot. Anzgr., June6 and 13, 1912: 5 pp.*; 75c.

Wohlenberg, E.—*Trail Construction and Location;* [from Forest Club Annual of Univ. of Nebraska, reprinted in "American Forestry," Aug., 1912].—E. & M. J., Nov. 16, p. 939; 800 w; 25c.

Fr. Z.—*Gedeckte Kohlenager mit Greiferbetrieb;* [Construction and power-shovel operation of covered coal-storage piles in Frankfurt].—Kali Erz & Kohle, June25, 1912; p. 629; 750 w; 35c.

Gr.—*Gefahr im Transport von Ferrosilicium;* [Dangers in transportation of ferrosilicon].—Centralbl. d. Hütten & Walzwerk, Sept.15,1912; p. 488; 600 w; 35c.

"Traveler."—*Arranging a Coal Storage Yard to Suit a Locomotice Crane;* [O. S. Richardson plant, Chicago].—Black Diamond, Aug.31,1912; p. 18; 2000 w*; 30c.

"Traveler."—*A Pocket Which Pays for Itself in 8 Years;* [Coal pockets of O. S. Godfrey & Co., Milton, Mass.].—Black Diamond, June29,1912; p. 17; 1500 w*; 30c.

———. *A Permanent Steel Stockpile Trestle for Ore;* [at Negaunee mine of Cleveland Cliffs Iron Co., Mich.; also usable for coal, limestone, etc.].—Iron Trade Rev., July11,1912; p. 79; 1200 w*; 20c.

———. *A 200-ton Traveling Crane;* [at Conway, Pa., shops of Penn'a R. R. Co.; Shaw electric crane].—Iron Trade Rev., July18,1912; p. 121; 500 w*; 20c.

———. *Bleichert'sche Elektrohängebahnen im Bergwerksbetriebe;* [Bleichert electric suspended trolleys for transporting materials about mines and mills].—Kohle & Erz, Oct.14, p. 1062; 100 w*; 35c. Also in Organ d. Bohrtechniker, Oct.15, p. 239; 1800 w*; 45c.

French: Rev. Noire, Oct.27, p. 520; 1300 w*; 35c.

———. *Building a Coal Road Extension through the Pennsylvania Mountains;* [Difficulties in Tamaqua extension of Lehigh & New England R. R.].—Engg. Record, July6,1912; p. 7; 2500 w*; 20c.

———. *Coal Handling Plant at the Wigan Electricity Works;* [Bennis overhead crane-trolley, automatic weigher, and U-link conveyor].—El. Rev. (London), Sept.27, 1912; p. 501; 600 w*; 35c.

———. *Die Benutzbarkeit ein und desselben Röhrenstanges für verschiedene Er-*

dölsorten; [Roumanian oils and the availability of the same pipe line for successive shipments of different kinds of oil].—Organ d. Bohrtechniker, June15,1912; p. 141; 500 w; 35c.

———. *Die Kohlentransportanlage des städtischen Elektrizitätswerks I in Frankfurt a. M., erbaut als Elektrohängebahn von Adolf Bleichert & Co., Leipzig;* [The coal-transportation plant of the municipal electric plant I in Frankfort on the Main, constructed as an electric suspended railroad by Adolf Bleichert & Co., Leipzig].—Rigasche Industrie-Zeitung, Oct.15,1912, p. 289; 1800 w*; 35 cts.

———. *Die Rheinschiffahrt; Ihre Bedeutung für den Kohlenhandel;* [Water transportation on the Rhine and its importance in the development of the west German coal trade].—Deu. Kohlen Ztg., 1912, No. 6; p. 59-61; 72-74; 75c.

———. *Ein neuer Riesenkran:* [New Demag travelling crane].—Fördertechnik, Aug.,1912; p. 183; 1000 w*; 45c.

———. *Electric Lifting Magnets;* [Phoenix type].—Iron & Coal Trades Rev., Oct. 4, p. 561; 1000 w; 45c.

———. *Electric Overhead Traveling Crane at Messrs. Dorman, Long & Co.'s Stockyard, Middlesbrough.*—Iron & Coal Trades Rev., June28, p. 1029; 1000 w*; 25c.

———. *Electrification of Butte, Anaconda & Pacific R. R.*—E. & M. J., July6,1912; p. 26; 1100 w; 25c.

———. *Evolution of Motive Power in Anthracite Mines.*—Coal Age, Nov.23,1912; p. 719; 1000 w*; 20c.

———. *Gate for Controlling Ore-Feed to Rolls or Crushers.*—E. & M. J., Aug.31, 1912; p. 400; 200 w*; 25c.

———. *Growth of Pacific Fleet of Oil Tank Steamers.*—Oil Age, July12,1912; p. 7-14; 2000 w; 20c.

———. *Hints for Crane Designers.*—Mechl. World, Sept.20,1912; p. 137; 800 w; 35c.

———. *Jib Arrester for Cranes;* [Butters Bros. & Co. device, Glasgow].—Engnrg., July5,1912; p. 27; 400 w*; 30c.

———. *Joplin Method of Dumping Buckets.*—E. & M. J., Aug.3,1912; p. 203; 750 w; 25c.

———. *Les chemins électriques suspendus Bleichert appliqués à l'exploitation des mines;* [The Bleichert suspended electric railway applied to the exploitation of mines].—Fer et Acier, Oct.,1912, p. 150; 2000 w*; 50c.

———. *Manipulation du Ferro-Silisium Riche;* [The handling of rich ferro-silicon; principles to be adopted for protection against the dangers that may result in the handling of ferro-silicon].—Journal du Four Electriq., Dec.1,1912; p. 508; 300 w; 35c.

———. *Maschinelle Entladung von Ziegeln;* [Crane loading and unloading of bricks].—Ton-Industrie Ztg., Oct.31, p. 1724; 500 w*; 35c.

———. *Method of Hanging Chute Door and Lever.*—E. & M. J., Sept.21,1912; p. 539; 400 w*; 25c.

———. *Narrow-Guage Railway Installation;* [Hunt equipment for handling ores, cement materials, ashes, clinker, etc.].—Amer. Fertilizer, June15,1912; p. 48; p. 52; 1000 w*; 25c.

———. *Neuere Elektrohängebahnen;* [New electrically operated suspended trolley systems in mining plants].—Montanist. Rundschau, Oct.1, p. 1059; 1500 w*; 35c.

———. *Neue Lagereinrichtungen fur feuergefährliche Flüssigkeiten;* [New devices for safe storage and handling of inflammable liquids].—Petroleum, Sept.4, p. 1361; 3000 w*; 45c.

———. *Oil Pipe Lines are Common Carriers;* [Order of U. S. Commerce Commission, June13,1912].—E. & M. J., June22, 1912; p. 1216; 500 w; 25c.

———. *Ore Unloading Plant on a Curved Dock.* (Describes the B. & O. plant at Lorain, O., built by Brown Hoisting Machinery Co.).—Ir. Age, Nov.28,1912; p. 1258; 2000 w*; 25c.

———. *Telpher Coal Transporter Plant at the Frankfort Municipal Electrical Works.*—Engg. Rev., Oct.15, p. 142; 1600 w*; 35c.

———. *The Inland Water-Transport Question;* [British coal and coke; with comparison of German developments].—Iron & Coal Trades Rev., Aug.30,1912; p. 320; 1200 w; 35c.

———. *30-ton Electric Traveling Crane;* [For naval yard at Jure, Japan].—Engnrg., July26,1912; p. 122-124; 500 w*; 35c.

———. *Transporting Freight by a Telpher Train;* [Westinghouse overhead trolley with trailer-car system].—Iron Age, Sept.14,1912; p. 590; 1200 w*; 30c.

———. *Zum Projekt des Rhein-Nordsee-Kanals;* [The projected Rhine-North Sea canal].—Deu. Bergwerks Ztg., July24,1912; p. 1; 1500 w; 35c.

———. *Zum Schleppmonopolgesetz;* [The proposed German law monopolizing towage on canals and rivers, and opposition of the mining interests thereto.]—Deu. Bergwerks Ztg., Oct.29,1912; p. 1; 5000 w; 35c.

Elevators and Conveyors

Edsall, H. J.—*Boilers With and Without Conveyors;* [Economies of overhead bin and conveyor system].—Power, Aug.6,1912; p. 183; 1500 w*; 20c.

Gobiet, A.—*Gurtförderer zum Transport von Koks;* [Band conveyors in the handling of coke].—Montanist. Rundschau, July1, 1912; p. 636; 1000 w*; 45c.

Gobiet, A.—*Eine neuartige Fördervorrichtung für Ammoniumsulfat;* [Tubular conveyor for ammonium sulphate at the Karolinen coke plant, Austria].—Montanist. Rundschau, Aug.16,1912; p. 793; 1600 w*; 45c.

Lehmann, —. *Ueber die Schachtförderung mittels Becherwerkes;* [Shaft hoisting by means of bucket elevators].—Braunkohle, Sept.27,1912; pp. 405-412*; 50c.

Maguire, H. J.—*Replaceable Lips for Elevator Buckets.*—Amer. Inst. Mng. Engrs., Bull. No. 69; Sept.,1912; pp. 1017-1019; 800 w*; $1.15.

Megraw, H. E.—*A Feeder for Fine Material.*—E. & M. J., Sept.21,1912; p. 541; 500 w*; 25c.

Moran, L.—*Un nouveau transporteur à gouttière;* [[The Giesecke under-running trough belt-conveyor].—Rev. d. Matériaux, June,1912; p. 74; 1000 w*; 65c.

Maus, O.—*Anlage zur Beschickung eines Brikettlagerplatzes;* [Conveyor for stocking a briquet storage yard].—Ver. Deu. Ingr., Zts.; No. 15, 1912; pp. 608-9*; 75c.

Tissington, F.—*Some Notes on Band Conveyors.*—Canadian Engr., July13,1912; p. 141; 1900 w; 25c.

Trautschold, R.—*Wear of Conveyor*

Belts; [Causes and precautions].—Iron Age, July4,1912; p. 26; 4000 w*; 30c.

Trautschold, R.—*Conveying and Elevating Machinery for the Power House; Suction Conveyors.*—Practl. Engr., Aug.15,1912; p. 821; 2500 w*; 25c.

Wahl, H. R.—*A Steel Elevator Boot;* [in No. 3 mill, Doe Run Lead Co., Rivermine, Mo.].—E. & M. J., June29,1912; p. 1269; 250 w*; 25c.

———. *An Automatic Continuous Recorder of the Weight of Material on Belt and Bucket Conveyors, Cable Railways, etc.*—Met. & Cheml. Engg., Sept.,1912; p. 562; 1300 w*; 35c.

———. *A Shoveling Machine for Loading and Handling Loose Materials;* [with delivery to belt conveyors; Myers-Whaley Co. type].—Engg. News, Sept.5,1912; p. 444; 1200 w*; 25c.

———. *An Under-Water Bearing;* [On drag conveyors for unwatering concentrates at Desloge mill, s. e. Missouri].—E. & M. J., Sept.7,1912; p. 445; 400 w*; 25c.

———. *Aparato transportador de minerales;* [Marcus tube conveyor].—Ingeniería (Madrid), July10,1912; p. 224; 600 w*; 35c.

———. *Economical Sand and Gravel Plant;* [Bucket-conveyors and cheap handling at Vancouver, B. C.].—Rock Products, Sept.,1912; p. 41; 3500 w*; 30c.

———. *European Bunkering Methods;* [Crane-elevator loaders on colliers].—Coal Age, Sept.14,1912; p. 355; 2100 w*; 20c.

———. *Les couloirs oscillants Flottmann;* [The Flottmann shaking conveyor].—Rev. Noire, Sept.1,1912; p. 408; Sept.15; p. —; 2000 w*; 50c.

———. *Reducing Belt Conveyor Costs.*—M. & S. P., Nov.16, p. 628; 1000 w; 20c.

———. *The Portable Elevator and Conveyor;* [Brown system].—Amer. Fertilizer, July13,1912; p. 46; 1500 w*; 25c.

———. *Transferring Mine-Run Ore from Skip Pocket to Ore Bin;* [Flat lapping-pan conveyor at No. 1 shaft, Federal Lead Co. mines, southeast Missouri].—E. & M. J., Nov.16, p. 931; 400 w*; 25c.

Motor Trucks and Tractors

Bingham, A. N.—*Operating Costs of Motor Trucks.*—Retail Coalman, Aug.,1912; p. 63; 1500 w; 25c.

Humphries, E. J.—*Motor Transport for Coal and Coke.*—Motor Traction, No. 390, 1912; p. 161-164*; 45c.

Hutchinson, R. W.—*Notes on Comparative Cost of Horse and Motor Truck Transportation in Engineering and Contracting Work.*—Engg. & Contractg., June19,1912; p. 689; 1800 w*; 20c. Also in Iron Age, June20, p. 1505; 2500 w*; 30c.

Hutchinson, R. W.—*The Use of Motor Trucks in Road Construction and Maintenance.*—Canadian Engr., Oct.17, p. 605; 1100 w; 25c.

McDonald, H. T.—*The Saurer Motor Hauling Ore;* [Tests in sand wash districts near Tucson, Ariz., for Pioneer Smelting Co.].—Mining & Engg. World, July27,1912; p. 152; 600 w; 10c.

Ruprecht, L.—*Gasoline Motor Truck Operation;* [Costs of various size commercial cars per year and per ton-mile; read to Soc. of Automobile Engrs., Detroit].—Iron Age, July4,1912; p. 32; 1500 w*; 30c.

Scott, B. S.—*Auto Trucks in the Brick Business.*—Brick, Nov.1, p. 335; 1000 w*; 25c.

Wolff, Th.—*Verwendung von Motorlastwagen im Bergbau und Hüttenwesen;* [Applications of the motor truck in mining and metallurgy].—Zentral Verbd. Bergbau Betriebsl. Oestr., Zts.; Sept.1,1912; p. 508; 4000 w; 45c.

Wolff, Th.—*Zur Frage der Rentabilität des Motorlastwagenbetriebes;* [The problem of the economy of the motor truck].—Deu. Bergwerks Ztg., June9,1912; section 3, page 1; section 4, p. 1; 5000 w; 35c.

Wolff, Th.—*Motorlastwagen im Dienst der Industrie;* [The economy of the industrial motor truck].—Riga. Industrie Ztg., Sept.15, p. 257; 4500 w; 45c.

"Traveler."—*Holding Trade by the Use of the Auto Truck;* [Suburban retail coal delivery].—Black Diamond, Sept.28,1912; p. 18; 1500 w*; 30c.

———. *A Fleet of 10-Ton Coal Trucks.*—Power Wagon, No. 91, 1912; pp. 17-22*; 50c.

———. *Hauling Sand and Gravel with a Motor Truck.*—Engg. Record, Oct.26, p. 473; 800 w*; 20c.

———. *How Manufacturers May Help to Hasten the Interest of Contractors in Motor Truck Haulage.*—Engg. & Contractg., July31,1912; p. 113; 800 w; 20c.

———. *Motor Truck Great Success in Arizona;* [Saurer 6½ ton truck hauling copper concentrates 27 miles to Yucca].—Mining & Engg. World, Oct.5,1912; p. 641; 500 w*; 10c.

———. *Motor Trucks and Trailers for Hauling Broken Stone;* [Use at Sioux City, Iowa].—Engg. Record, Aug.3,1912; p. 124; 700 w; 20c.

———. *Oil Tractor Haulage in the Mining Regions;* [at Beck mines, Atlantic, Wyom.].—Mng. Sci., Aug.8,1912; p. 90; 500 w*; 20c.

———. *Petrol-Electric Traction;* [Systems in English cities].—Australian Mng. Standd., July11,1912; Aug.1, p. 112; 3000 w*; 50c.

———. *Storage Battery Trucks for Transporting Material* [on rails of Jeffrey Mfg. Co. works, Columbus, O.].—Iron Trade Rev., Aug.22,1912; p. 356; 500 w*; 20c.

———. *The Miller Petrol-Electric Road Train.*—Mng. & Engg. Rev., Aug.,1912; p. 412; 1000 w*; 45c.

— —. *The Result of a Motor Truck Experiment;* [at Ladew belt works, Glen Cove, N. Y., for suburban freighting].—Iron Age, Aug.15,1912; p. 343; 1000 w*; 30c.

Ore Docks and Shipping

Chittenden, H. M.—*Canadian Ports of the Pacific;* [Strategic relations, plans for the future, influence of Panama Canal; Vancouver, New Westminster, Victoria, Prince Rupert; read to Amer. Soc. Civil Engrs., Seattle; abstract].—Canadian Engr., Oct.10, 1912; p. 585; 4500 w*; 25c.

Goethals, G. R.—*The Reinforced-Concrete Lumber Dock at Balboa, Canal Zone.*—Engg. Record, July20, p. 60; 2700 w*; 25c.

Hornaday, W. D.—*Tampico is Now Mexico's Largest Oil Port;* [Shipping facilities].—Mining & Engg. World, Sept.21,1912; p. 527; 2000 w*; 10c.

Kelly, W. R.—*New Graving Dock, Belfast; Mechanical Plant and General Appliances;* [Read to Instn. of Mechl. Engrs.,

Belfast, 1912].—Engnrg., Aug.2,1912; p. 155; Aug.16, p. 239; 5000 w*; 50c. Also in Engg. Rev., Aug.15, p. 50; 5000 w*; 35c.

Michenfelder, C.—*Zur Frage der maschinellen Kohlenbewegung in Seehäfen;* [The problem of mechanical handling of coal in harbors].—Fördertechnik, Oct.,1912; p. 217; Nov., p. —; 7000 w*; 75c.

Schuurman, —. *Der neue Osthafen in Frankfurt, Main;* [The new east harbor at Frankfurt a.M., and loading equipment].—Ver. Deu. Ingr., Zts.; May25,1912; pp. 817-822*; 75c.

Tupper, C. A.—*Conveying Ore to Vessels on Inaccessible Coasts;* [Cableways, crane, etc., installation, chiefly for loading iron in Cuba, Elba and Spain].—Mining & Engg. World, July20,1912; p. 93; 4000 w*; 10c.

Tupper, C. A.—*Construction of Permanent Ore-Loading Docks;* [Review of the docking facilities in the Lakes region].—Mining & Engg. World, Aug.3,1912; p. 185; Aug.10, p. —; 5000 w*; 20c.

Tupper, C. A.—*Ore Transportation on Island of Elba;* [Cableways, unloading and docking facilities].—Iron Age, June20,1912; p. 1510; 1500 w*; 30c.

W. H. Jackson & Co.—*The Port of Grimsby and Immingham Annual.*—Grimsby, 1912; $2 (book).

———. *A New Penna. R. R. Power Plant;* [Iron-ore unloading at Cleveland, Ohio, from lake steamers; power plant].—Iron Age, Aug.29,1912; p. 443; 2500 w*; 30c. Also in Iron Trade Rev., Aug.29, p. 401; 1000 w*; 20c.

———. *A Reinforced Concrete Pile Pier;* [Redondo, Cal.; 637 ft. long].—Engg. Record, Aug.24,1912; p. 207; 1200 w; 20c.

———. *Cardiff Docks Sacrifice Speed to Get Exact Sizing;* [Handling methods at Cardiff, Wales].—Black Diamond, Aug.24, 1912; p. 18; 2400 w*; 30c.

———. *Cargo-Loading and Discharging Appliances at Immingham Docks.*—Engnrg., June14,1912; p. 816; June21, p. —; 4000 w*; 50c.

———. *Die Entwickelung des Verkehrs auf dem Dortmund-Ems Kanal;* [Evolution of commercial shipments on the Dortmund-Ems canal, Prussia].—Glückauf, June8,1912; p. 917; 2000 w*; tables; 50c.

———. *Die Verladeanlagen des neuen Osthafens der Stadt Frankfurt a. Main;* [Ore loading docks and equipments at the east port of Frankfurt a. Main].—Kohle & Erz, Oct.14, p. 1082; 1000 w*; 35c.

———. *England Builds a Dock to Handle Export Coal;* [Describes Immingham docks of Gt. Central Ry.].—Black Diamond, July 20,1912; p. 15; 3200 w*; 25c.

———. *Harbor Cranes at Foreign Ports.*—Engg. News, Sept.12,1912; p. 478; 1200 w*; 25c.

———. *Immingham Dock.*—Engg. Rev., July15,1912; p. 29; 750 w; 35c.

———. *Lake Docks May Determine Success at Panama;* [Coal handling methods at Lake docks].—Black Diamond, Oct.12, p. 18; 2400 w*; 30c.

———. *List of Tank Vessels;* [Registered at Lloyd's since 1907].—Petroleum World, Exhibn. No., Sept.,1912; pp. 48-49; 45c.

———. *New Coal-Loading Appliance at Sunderland Docks.*—Engr., No. 2939, 1912; pp. 430-432*; 45c.

———. *Ore Handling Bridge in Cuba;* [Cuban RR. cantilever coal and iron handling bridge at Antilla docks].—Iron Trade Rev., July25,1912; p. 170; 800 w*; 25c.

———. *Ore Loading on the Island of Elba.*—Mines & Minerals, Aug.,1912; p. 33; 1300 w*; 35c.

———. *Rebuilding a Railroad Coal Dock;* [Erie R. R. Co. docks at Cleveland, O.].—Engg. Record, June29,1912; p. 719; 1000 w*; 20c.

———. *Relation of Docks to the Varied Uses for Coal;* [Speed handling on Lake docks; slower but careful handling on Coast docks].—Black Diamond, Oct.5,1912; p. 47; 2400 w; 30c.

———. *The Blyth, Engl., Coal-Loading Harbor.*—Coal Age, Sept.14,1912; p. 364; 1000 w*; 20c.

———. *The 50,000-ton Ore Dock at Marquette.*—Engg. Record, July6,1912; p. 4; 2500 w*; 20c.

———. *The King's Dock, Immingham.*—Engnrg., July26,1912; p. 126; 1600 w; 35c.

———. *The World's Largest Bunkering Port;* [Methods and conditions at Cardiff, Wales].—Coal Age, Aug.3,1912; p. 147; 1200 w*; 20c.

———. *Zur Ausgestaltung des Emdener Hafens;* [The Dortmund-Ems canal and the availability of Emden as a port].—Deu. Bergwerks Ztg., Aug.15,1912; p. 1; 600 w; 35c.

ORE GENESIS

See also Mining Geology.

Allen, E. T., and J. L. Crenshaw. —*Sulphides of Zinc, Cadmium and Mercury; their Crystalline Forms and Genetic Conditions; with a Microscopic Study* by H. E. Merwin.—Amer. Jnl. of Sci., Oct.,1912; p. 341-368*; 65c.

Arrhenius, S.—*Zur Physik der Salzlagerstätten;* [The physics of salt deposits].—Nobel Inst. Vetensk. Akad., Medd., Vol. 2, No. 20, 1912; 25 pp.

Arrhenius, S.—*Theory of Solutions.*—New Haven, Conn.; 1912; 247 pp.; $2.25; (book).

Barrois, Ch.—*Sur la composition et le gisement de la paraffine de schistes bitumineux du bassin houiller du Pas-de-Calais;* [Composition and occurrence of paraffin in bituminous shales in the Pas-de-Calais coal field, North France].—Soc. Geol. du Nord, Annales; Vol. 40, 1911; pp. 157-170.

Barrois, Ch.—*Les variations de composition du charbon dans certaines veines d'Aniche;* [Variations in coal composition in certain seams in the Aniche district, N. France].—Soc. Geol. du Nord, Annales, Vol. 40, 1911; pp. 177-186.

Bowen, N. L.—*The Order of Crystallization in Igneous Rocks;* [Discusses precautions in interpreting transparent sections].—Jnl. of Geol'y, July-Aug.,1912; pp. 457-469*; 65c.

Breynaert, M. F.—*Le Gisement Asphaltique du Val de Travers;* [The asphalt deposit of the Travers valley (France)].—Annales de Mines (Paris), Oct.,1912; p. 316; 9500 w*; 65c.

Brown, G. E.—*An Unusual Zonal Arrangement of Tin Ore in a Vein;* [Surface zone of oxidized workable tin overlying zone of silver ore, east of Lake Poopo, Oruro district, Bolivia].—Mng. Jnl., June 15,1912; p. 611; 1600 w*; 35c.

Buckman, H. O.—*Die Entshehung von Verwitterungstonen;* [The genesis of resi-

dual clays; German abstract from Amer. Ceramic Soc., Trans., Vol. 13, 1911; pp. 336-384].—Ton Industrie Ztg., June11,1912; p. 940; 1800 w; 30c.

Burkhardt, W. — *Lösungserscheinungen an Anhydrit;* [Some experiments on the solubility of anhydrite].—Zts. f. Krystallogr., Feb.,1912; pp. 209-230*; 75c.

Butler, B. M.—Some Recent Developments at Leadville; a Leadville Fissure Vein; [New Monarch, Cleveland or Louemma vein, geology and its ores].—Econ. Geol'y, June,1912; pp. 315-324*; 65c.

Cayeux, L.—*Comparaison entre les minerais de fer Huroniens des Etats-Unis et les minerais de fer oolithique de France;* [Comparisons of the Huronian iron ores of the Lake Superior region with the oolithic ores of France; favors organic origin of U. S. ore].—Acad. d. Sci. Paris, C-R., Vol. 153. 1911; pp. 1188-1190.

Choffat, P.—*Gisements de fer dans le Triassique et dans les schistes paléozoiques des régions de Pias et d'Alvayazere;* [Iron ore deposits in the Triassic and in the Paleozoic schists near Pias and Alvayazere].—Portugal Service Géol., Communications, Vol. 9, 1911, pp. 27-32; 75c.

Collins, G. E.—*Persistence of Ore in Depth;* [Reviews evidence on various Colorado lodes].—M. & S. P., Sept.28,1912; p. 409; 2400 w; 20c.

Coulbeaux, M.—*Gisements de Borate de Chaux d'Asie Minoure;* [Deposits of borate of lime in Asia Minor].—Annales de Mines (Paris), Oct.,1912; p. 294; 6000 w; 65c.

Cox, G. H.—*New Type of Wisconsin Zinc Deposit.*—E. & M. J., Nov.30,1912; p. 1040; 1800 w*; 25c.

Crema, C.—*Acque saliente della Liguria* 385; $2.

Dahms.—*Ueber Erzlagerstätten in sauren Eruptivgesteinen Deutsch-Südwestafrikas;* [The occurrence of ore deposits in acidic eruptive rocks—diabase, pegmatites and granite—in German S. W. Africa (tin, monazite, tantalite, tungsten, molybdenum, copper)].—Zts. f. prakt. Geol., June,1912; pp. 240-247; 75c.

Derby, O. A.—*Speculations Regarding the Genesis of the Diamond, II.*—Jnl. of Geol'y, July-Aug.,1912; pp. 451-456; 65c.

Doelter, C.—*Handbuch der Mineralchemie;* [Manual of Mineralogical Chemistry; Vol. I, Carbons and Carbonates; Vol. II, Silica and Silicates].—Berlin, 1912; pp. 556, 434; $15 (book).

Donath, Ed.—*Zur chemischen Charakteristik der Braunkohlen;* [Chemical characteristics of the lignites].—Oestr. Zts. f. Berg- & H-wesen, May25,1912; p. 281; 4000 w; 45c.

Dowling, D. B.—*Coal Occurrences and Progress of Development Work in Alberta and Saskatchewan;* [Including special report on Roche Miette area, Jasper Park, Alta.].—Canada Geol. Survey, Rep. f. 1911; pp. 201-225*.

Draper, D.—*The Origin of Alluvial Diamonds.*—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 53; 4000 w*; $1.

Dumble, E. T.—*The Occurrence of Gold in the Eocene Deposits of Texas.*—Amer. Inst. of Mng. Engrs., Bull. No. 70; Oct., 1912; pp. 1021-1024.

Duncan, G. S.—*Contribution to the Study of Pre-Cambrian Rocks of the Harney Peak District of S. Dakota;* [mica and tin-bearing granites, and pegmatite and quartz lenses].—Amer. Inst. Mng. Engrs., Bull. 67, July,1912; pp. 751-762*; $1.15

Eakle, A. S.—*The Minerals of Tonopah, Nev.*—Univ. of Cal., Dept. of Geol'y, Bull; 1912; 20 pp*; 65c.

Ehlert, H.—*Studien über Salzlösungen;* [Studies on the solubility of mineral salts under various conditions of temperature, pressure and association; calcium phosphate, ferrous carbonate, 3-calcium phosphate, barium sulphate, etc.].—Dresden Techn. Hochschule, 1912 dissert; $1.50 (Thesis).

Abstract in Zts. f. Elektrochemie, Aug. 15,1912; p. 727; 1000 w; tables; 45c.

Falconer, J. D.—*Nigerian Tin; Its Occurrence and Origin.*—Economic Geol'y, Sept.,1912; pp. 542-546; 65c.

Fleck, A.—*Die Lagerungsverhältnisse im nordwestböhmischen Braunkohlenbecken zwischen Brüx und Dux;* [Stratigraphy of the northwest Bohemia coal field between Brüx and Dux].—Glückauf, Oct.12, pp. 1661-1668*; 45c.

Friedensburg, F.—*Die subsudetische Braunkohlenformation in Flussgebiet des Mittellaufes der Glatzer Neisse;* [The subsudetic formation of lignite in the Glatzer Neisse river basin].—Breslau dissertation; 1912; 60 pp.; $1.

Garfias, V. R.—*The Effect of Igneous Intrusions on the Accumulation of Oil in Northeastern Mexico* [Vera Cruz].—Jnl. of Geol'y, Oct.-Nov.,1912; pp. 666-672*; 65c.

Garrison, F. L.—*Persistence of Ore in Depth;* [Reviews Rickard's paper].—M. & S. P., Sept.21,1912; p. 377; 1400 w; 20c.

Glasenapp, M.—*Ueber den Faulschlamm von Suschenhof bei Riga;* [The foul-slime, or sapropel of Potonié; deposits near Arensburg and at Suschenburg near Riga, Russia].—Riga Industrie Ztg., June30,1912; p. 177; 3000 w*; 45c.

Glöckner, F. — *Das volumenverhältnis zwischen Moortorf und daraus resultierender autochthoner Humusbraunkohle;* [Volume relations between peat and the humuslignites resulting autochthonously therefrom].—Zts. f. prakt. Geol., Sept.,1912; pp. 371-374; 75c.

Glöckner.—*Inkohlung und Kaolinisierung;* [Coalizing of carbonaceous deposits and effects upon overlying strata].—Braunkohle, June12,1912; p. 225-226; 45c.

Granigg, B.—*Die lappländischen Eisenerzlagerstätten von Kiruna und Gellivare;* [The iron ore deposits of Kiruna and Gellivare, Swedish Lappland].—Montanist. Rundschau, Sept.1,1912; p. 845; Sept.16; 7000 w*; 75c.

Hackl, O.—*Chemischer Beitrag zur Frage der Bildung natürlicher Schwefelwässer und Säuerlings;* [Chemical notes on the problem of genesis of sulphur and acidulated natural waters].—K. K. Geol. Reichs Anst. Wien, Verhandl. f. 1911; No. 16; pp. 380-

Hall, E. K.—*Faults.*—Australian Mng. Standd., June13,1912; p. 549; 1500 w*; 35c.

Harris, G. D.—*Oil Concentration about Salt Domes;* [In gulf states coastal regions].—Science, New Series, 1912; Vol. 35, p. 546; 50c.

Hartley, Carney.—*Method in Selling Mining Properties.*—Mg. Science, Nov.21,1912; p. 327; 1800 w; 15c.

Hauptick, E. de.—*Search for Radium in Russia.*—Mg. Jnl. (London), Nov.30,1912; p. 1172; 750 w; 35c.

Hempel, W., and C. Schubert.—*Ueber die Dissoziation einiger Oxyde, Carbonate und Sulfide;* [Dissociation of some mineral oxides, carbonates and sulphides; abstract of Schubert's thesis in Dresden Techn. Hoch-

schule, 1912].—Zts. f. Elektrochemie, Aug. 15,1912; p. 729; 200 w; tables; 45c.

Hershey, O. H.—*Genesis of the Lead-Silver Ores in Wardner District, Idaho;* [Reply to Ransome].—M. & S. P., Sept.14,1912; p. 344; 3000 w; 20c.

Hibsch, —. *Das Auftreten gespannten Wassers von höherer Temperatur in den Schichten der obern Kreideformation Nordböhmens;* [Occurrence of hot underground waters under artesian pressure in the Upper Cretaceous strata of north Bohemia].—K. K. Geol. Reichsanst., Jahrb., Vol. 62, No. 2; 1912; pp. 311-331*; $2.

Hills, Victor G.—*Tungsten and the Scheelite Mines in Nova Scotia.*—Jnl. Mg. Soc., N. S., Vol. XVII, 1912; p. 55; 6 p*; 50c.

Höfer von Heimhalt, H.—*Grundwasser und Quellen; Hydrologie des Untergrundes;* [Ground Water and Springs, or Underground Hydrology].—Braunschweig, Germany; 1912; 146 pp.; 51 figs.; $1.50; (book).

Hoff, J. H. van t'.—*Untersuchungen über die Bildungsverhältnisse der ozeanischen Salzablagerungen, insbesondere des Stassfurter Salzlagers;* [Researches on the genetic relations of oceanic salt deposits, with special reference to the Stassfurt salines].—Leipzig, 1912; 374 pp*; $6.50 (book).

Hoover, H. C., and L. H.—*Theories of Ore Deposition Prior to the 17th Century.*—M. & S. P., Oct.5,1912; p. 426; 6500 w*; 20c.

Hore, Reginald E.—*Iron Formation in Temagami District, Ontario.*—Mg. & Eng. World, Dec.7,1912; p. 1040; 1000 w*; 10c.

Hore, R. E.—*Origin of the Sudbury Nickel and Copper Deposits.*—Mining & Engg. World, June29,1912; p. 1345; 4800 w*; 10c.

Van Horn, F. R.—*The Occurrence of Silver-, Copper- and Lead-Ores at the Veta Rica Mine, Sierra Mojada, Coahuila, Mex.;* [Geology and genesis].—Amer. Inst. Mng. Engrs., Bull. 68, Aug., 1912; pp. 867-882*; $1.15.

Horwood, C. B.—*Iridosmine from the New Rietfontein Mines, Its Occurrence, Analysis and Genesis.*—S. Afr. Mng. Jnl., May18,1912 p. 430; May25, p. —; 4000 w; 50c.

Inglis, J. A. C.—*Genesis of a Gold Deposit; Conqueror Lode, the Peak, Cobar, N. S. W.*—Australian Mng. Standd., July4, 1912; p. 9; 1000 w; 35c.

Johnson, R. H.—*The Accumulation of Oil and Gas in Sandstone;* [Discusses surface tension and capillarity].—Science, 1912; Vol. 35; pp. 458-459; 50c.

Katzer, Fr.—*Zur Kenntnis der Arsenerzlagerstätten Bosniens;* [The arsenic ore deposits of Bosnia; chiefly geologic].—Oestr. Zts. f. Berg- & H-wesen, May18,1912; p. 267; May25, p. 285; 4500 w*; 75c.

Keyes, Charles R.—*Trunk Channels as Ore Localizers.*—E. & M. J., Dec.7,1912; p. 1067; 1500 w; 25c.

Knapp, I. N.—*Natural Gas, with Incidental Reference to Other Bitumens.*—Jnl. Fr. Inst., Nov.,1912; 22 pp*; 75c.

Kobayashi, G.—*Influence of Petroleum on the Geothermic Gradients in the Echigo Oil Fields.*—Geol. Soc. of Tokyo, Jnl.; Vol. 19; 1912; pp. 9-12.

Krümmer, Ad.—*Die Tektonik des Emser Gangzuges;* [Faults, folding and tectonics of the silver-lead-zinc vein systems of the Ems district, Hesse-Nassau].—Zts. f. prakt. Geologie, Aug.,1912; pp. 301-319*; 75c.

Lachmann, R.—*Studien über den Bau von Salzmassen; Physikalische Kräfte im Salz;* [Studies in salt structure; Crystallization and physical energy].—Kali, July 15,1912; p. 342-353*; Aug. 1, pp. 366-375; 75c.

Lakes, Arthur.—*Depth and Continuity of Fissure Veins and Their Ore.*—Mg. & Eng. World, Dec.14,1912; p. 1095; 3000 w*; 10c.

Lakes, Arthur—*Early Day Operations of Shallow Placer Deposits.*—Mg. Science, Nov. 21, 1912; p. 329; 1500 w*; 15c.

Lakes, Arthur.—*Relation of Shearage Zones and Mineral Veins.*—Mg. & Eng. World, Nov.30,1912; p. 1001; 10c.

Lakes, A., Sr.—*Ore Deposits and Volcanoes.*—B. C. Mng. & Engg. Record, July, 1912; p. 388; 1200 w; 35c.

Lakes, H.—*Some Points to Be Considered in Mine Predictions;* [Prospectors' problems and application of geologic principles and ore genesis].—Mng. Sci., Nov.14, p. 308; 2800 w; 20c.

Lane, A. C.—*Mine Waters;* [in Michigan copper country, and effect on ore deposition and concentration; from Mich. Geol. Survey Rep. f. 1909].—M. & S. P., Nov.9, p. 589; 2000 w; 20c.

Lane, A. C.—*Diamond Drilling at Point Mamainse, Ontario;* [Prospecting by Calumet & Hecla Co. for copper].—Canada Dept. Mines, Mines Branch, Bull. 6; 1912; 59 pp.*; 50c.

de Launay, L., and G. Urbain.—*Recherches sur la métallogénie des blendes et des minéraux qui en dérivent;* [The genesis of blendes and the minerals derived therefrom].—Soc. Geol. France, Bull.; Ser. 4, Vol. 10; 1911; pp. 786-795; $1.50.

Lazarevic, M. — *Die Enargit-Covellin-Lagerstätte von Cuka-Dulkan bei Bor in Ostserbien;* [The enargite-covellite deposits at Cuka-Dulkan near Bor, East Servia].—Zts. f. prakt. Geologie, Sept.,1912; pp. 337-370*; 75c.

LeRoy, O. E.—*Geology and Ore Deposits of Phoenix, Boundary District, B. C.*—Canada Dept. Mines, Geol. Survey Memoir No. 21; 1912; 110 pp.*; 50c.

Lindgren, W.—*The Nature of Replacement.*—Econ. Geol'y, Sept.,1912; pp. 521-535; 65c.

Locke, Aug.—*The Abnormal Temperatures of the Comstock Lode, Nev.*—Economic Geol'y, Sept.,1912; p. 583-537*; 65c.

Locke, Aug.—*The Ore Deposits of Goldfield, Nev.*—E. & M. J., Oct.26, p. 797; Nov. 2, p. 843; 15,000 w*; 40c.

Lotz, H.—*Die Verwitterung einiger gesteinsbildenden Mineralien unter dem Einfluss von schwefliger Säure;* [The weathering of various rock-forming minerals under the influence of sulphurous acids].—Giessen. dissert; 1912; 108 pp*; $1.50; (Thesis).

Maclaren, M.—*Persistence of Ore in Depth.*—M. & S. P., Oct.26, p. 534; 2000 w*; 20c.

Mager, H.—*Hydrologie Souterraine; les moyens de découvrir les eaux souterraines et de les utiliser;* [Methods of discovering and utilizing underground waters].—Paris, 1912; 776 pp; 311 maps; $6 (book).

Marriott, H. F.—*The Problem of Gold at Depth;* [Rand].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 67; 2000 w; $1.

MacDonald, D. F.—*Slides in the Culebra Cut at Panama.*—Engg. Record, Aug.31, 1912; p. 228; 4000 w*; 25c.

McGeorge, Wm.—*The Occurrence of Efflorescence on Lava Bricks;* [Tests of solu-

bility and disintegration of lava bricks at Honolulu].—Jnl. of Ind'l & Engg. Chem'y, Aug.,1912; p. 559; 65c.

McNair, S. S.—*What is a Stratified Rock*.—E. & M. J., July27,1912; p. 147; 500 w; 25c.

MacLean, T. A.—*Notes on the Porcupine Gold Region, Ontario.*—Jnl. Mg. Soc., N. S., Vol. XVII, 1912; p. 82; 11 p*; 50c.

Meuche, A. H.—*Development of the Copper Mines of Lake Superior and Their Geological Relations.*—Mich. Geol. Survey, Publication No. 6, 1912; pp. 887-931.

Meyer, H. L. F.—*Entstehung der deutschen Kalisalzlager;* [Genesis of the German potash salt deposits; abstract from Oberhess. Ges. f. Nautr- & Heilk., Giessen; Ber. f., 1910-11].—Kali, July15,1912; p. 356; 300 w; 45c.

Michael, R.—*Die Temperaturmessungen im Tiefbohrloch Czuchow;* [Temperature measurements in the world's deepest borehole at Czuchow, Silesia; from Kgl. Preuss. Geol. L-A., Jahrb., Vol. 31, Part 2, No. 1].—Kohle & Erz, Oct.21, p. 1106; 2200 w*; 35c.

Milch, L.—*Ueber Plastizität der Mineralien und Gesteine;* [Plasticity of minerals and rocks under the conditions of temperature and pressure in the earth's interior].—Geol. Rundschau, 1911, No. 3; pp. 145-162; 75c.

Reviewed in English by E. Steitman in Jnl. of Geol'y, July-Aug.,1912; p. 475; 1200 w; 65c.

Miller, Wm. J.—*Garnet Deposits of Warren County, N. Y.* (Abstracted from Economic Geology, Aug.,1912).—Mg. & Eng. World, Dec.14,1912; p. 1084; 1200 w; 10c.

Milner, W. C.—*History of Albertite in New Brunswick.*—Jnl. Mg. Soc., N. S., Vol. XVII, 1912; p. 62; p. 8; 50c.

Morley, F. H.—*Outcrops of Precious Metal Veins.*—M. & S. P., Sept.21,1912; p. 368; 2200 w*; 20c.

Mulert, O.—*Ueber die Thermochemie der Kieselsäure und der Silikate;* [Thermochemistry of silica and the silicates].—Zts. f. anorgan. Chemie, 1912, No. 2; pp. 198-240*; $1.15.

Müller, Fr. C.—*Die diluvialen Kohlen in der Schweiz;* [Glacial coal deposits in Switzerland].—Zts. f. prakt. Geologie, Aug., 1912; pp. 289-301*; 75c.

Münichsdorfer, F.—*Die Gas- und Schwefelbrunnen im bayerischen Unterinngebeit;* [Gas and sulphur springs of lower Bavaria].—Geogn. Jahresh., 1911, pp. 233-257*; 75c.

Nason, F. L.—*The Bearing of the Theories of the Origin of Magnetic Iron Ores on Their Possible Extent.*—Amer. Inst. Mng. Engrs., Bull. 67, July,1912; pp. 695-709; $1.15.

Niggli, P.—*Die Gasmineralisatoren im Magma;* [Gaseous mineralizers in rock magmas].—Zts. f. anorgan. Chemie, 1912, No. 2; pp. 161-188; 25 figs.; $1.15.

Niklas, H.—*Chemische Verwitterung der Silicate und der Gesteine mit besonderer Berücksichtigung des Einflusses der Humusstoffe;* [Chemical disintegration of silicates and of rocks with special reference to the influence thereon of humic materials].—Berlin, 1912; 143 pp.; $3; (book).

Palmer, LeRoy A.—*Low Costs at the Wasp No. 2 Mine, So. Dakota.*—M. & M., Dec.,1912; p. 281; 2500 w*; 35c.

Peters, F.—*Estudio de las alteraciones superficiales de los yacimientos metaliferos;* [Superficial alteration of metaliferous ore deposits; from Asso. d. Ingrs. Sortis de Mons, Publications].—Rev. Minera, Oct.8, p. 472; Oct.16, p. 481; 2500 w; Nov.1,1912; p. 509; 2500 w; 80c.

Pina de Rubies, S.—*Estudio acerca de la dunita platinifera de los Urales;* [Chemical and petrographic study of the platiniferous dunite of the Urals].—R. Acad. d. Ciencias Madrid, Rev.; Vol. 10, 1911; pp. 151-186.

Pring, J. N., and D. M. Fairlie.—*Synthesis of Hydrocarbons at High Temperatures and Pressures;* [Read to Internatnl. Congr. Appl. Chem'y; brief abstract].—Met. & Chem'l. Engg., Sept. Suppl., 1912; p. 586; 1000 w; 35c.

Probert, F. H.—*Copper Butte, Ariz., a Volcanic Throat.*—E. & M. J., Sept.14,1912; p. 499; 1200 w*; 25c.

Randall, John.—*Practical Cyaniding* (Part V).—M. & M., Dec.,1912; p. 270; 7000 w*; 35c.

Ransome, F. L.—*Genesis of the Lead-Silver Ores of Wardner District, Idaho.*—M. & S. P., Aug.3,1912; p. 143; 2200 w; 20c.

Redlich, K. A.—*Das Schürfen auf Erze von ostalpinem Charakter;* [Prospecting the East Apls types of sulphide and carbonate ores; read at Allgm. Bergmannstag, Vienna, Sept.].—Montanist. Rundschau, Nov.1, p. 1145; 6000 w*; 45c.

Redlich, K. A.—*Ein Beitrag zur Genesis der alpinen Kieslagerstätten;* [Genesis of the pyrite deposits of the Austrian Alps].—Zts. f. prakt. Geologie, May,1912; p. 197; 2800 w*; 75c.

Rice, E. R.—*Determining Strike and Dip of Strata.*—E. & M. J., Oct.12, p. 685; 600 w*; 25c.

Rickard, T. A.—*Persistence of Ore in Depth;* [Chiefly on gold fields].—M. & S. P., Aug.24,1912; p. 232; Aug.31, p. 264; 7000 w; 30c.

Riedel, O. — *Chemisch-mineralogisches Profil des älteren Salzgebirges im Berlepschbergwerk bei Stassfurt;* [Succession and genesis of the salines in the Berlepsch potash-salt mine, Stassfurt].—Zts. f. Krystallogr., Jan.,1912; pp. 139-173*; 75c.

de Schmid, H.—*Mica; Its Occurrence, Exploitation, and Uses;* [2d edition].—Canada Dept. Mines, Mines Branch; Paper No. 118; 1912; 411 pp*; $1 (book).

Scheerer, —. *Die Braunkohlenvorkommen des Grossherzogtums Hessen;* [Lignites of the grand-duchy Hessen].—Braunkohle, Oct.11, pp. 437-443; Oct.25, pp. 469-474; Nov.8, pp. —; 85c.

Schofield, S. J.—*Origin of the Silver-Lead Deposits of East Kootenay, B. C.*—Econ. Geol'y, June,1912; pp. 351-364*; 65c.

Singewald, J. T., jr.—*The Iron Ore Deposits of the Cebolla District, Colorado;* [Gunnison County; titaniferous magnetite].—Economic Geol'y, Stept.,1912; pp. 560-573*; 65c.

Smith, D. T.—*Vain Systems of the Comstock Lode.*—E. & M. J., Nov.9, p. 895; 1000 w*; 25c.

Spurr, G. E., G. H. Garrey and C. N. Fenner.—*Study of a Contact Metamorphic Ore Deposit; Dolores Mine, Matehuala, S. L. P., Mex.;* [Cupriferous pyrite].—Econ. Geol'y, Aug.,1912; p. 444-484*; 65c.

Spurr, J. E.—*Theory of Ore Deposition;* [Origin of solutions in zone of igneous rock differentiations].—Econ. Geol'y, Aug., 1912; p. 485-492; 65c.

Steuer, —. *Bildung von Mineral und Grundwasser in der Wetterau;* [Genesis of

the mineral springs and ground waters of the Wetterau, Germany].—Jnl. f. Gasbeleuchtg., Oct.26, pp. 1054-1057; 50c.

Stevenson, J. J.—*The Formation of Coal Beds; Part II.*—Amer. Philos. Soc., Proc.; 1911; pp. 519-643; $2.

Stille, H. — *Ueberfaltungserscheinungen im hannoverschen Salzgebirge;* [Overthrust faults in the salt formations in the Hannover region].—Niedersächs. Geol. Ver., Ber. f. 1911; pp. 192-207*; $2.

Stokes, Ralph.—*Premier Diamond Mine.*—Mg. Mag., Nov.,1912; p. 366; 5500 w*; 45c.

Storms, W. H.—*Possibilities of the Mother Lode in Depth.*—M. & S. P., Oct.12, p. 459; 4200 w*; 20c.

Stremme, Prof.—*Unterscheidung von Asphalten auf primärer und sekundärer Lagerstätte;* [Sapropel genesis of Paleozoic asphalts, and distinction between Paleozoic and later bitumens; read to Deu. Geol. Ges.; brief abstract in] Glückauf, July27, 1912; p. 1215; 300 w; 45c.

Thomson, J. A.—*Classification of the Rocks of the Western Australian Goldfields.*—Geol. Mag., Apr.,1912; pp. 147-153, May, pp. 210-218*; $1.20.

Tolman, C. F., Jr.—*Persistence of Ore in Depth.*—M. & S. P., Sept.7,1912; p. 311; 1800 w; 20c.

Turner, H. W.—*Gossan Outcrops of Cupriferous Pyrite.*—Mg. Mag., Nov.,1912; p. 357; 3200 w*; 45c.

Turner, H. W.—*Copper Mines of the Ural Region;* [Describes ores and ore-bodies].—Mng. Mag., June,1912; pp. 442-451*; 45c.

Ubbelohde, L., and Philippide, S.—*Ueber die Einwirkung von Katalysateren auf Erdöl;* [Effect of various catalyzing agents on petroleum].—Petroleum, Aug.21, p. 1233-1238*; 2000 w; tables; 45c.

Umpleby, J. B.—*Preliminary Account of the Ore Deposits of the Loon Creek District, Idaho;* [Gold-copper; also lead-silver].—U. S. Geol. Survey, Bull. 530-G; 1912; pp. 3-11*; 10c.

Abstract in Mng. Sci., July25, p. 58; 2000 w; 20c. Also in Mining & Engineering World, Aug.10, p. 243; 2600 w*; 10c. Also in Mines & Methods, Aug., p. 558; 2100 w; 20c.

Ward, L. K.—*The Silver-Lead Lodes of the Waratah District.*—Tasmania Mines Dept. Bull.; 1912; pp. —; $1.50.

Weed, W. H.—*Geology and Ore Deposits of the Butte District, Montana.*—U. S. Geol. Survey, Prof. Paper No. 74; 1912; 262 pp*; 50c.

Wendeborn, B. A.—*Die Kupfererz- und Limonit-Lagerstätten von Majdan-Pek in Serbien;* [The copper-bearing quartz-andesite dike and buried residual limonite deposits of Majdan-Pek, Servia].—Zts. f. prakt. Geologie, July,1912; pp. 266-280*; 75c.

Whitelaw, O. A. L.—*The Wedderburn Goldfield;* with *Petrographical Notes,* by D. J. Mahony.—Victoria Geol. Survey, Memoir 10; 1912; (book).

Willis, Bailey.—*Index to the Stratigraphy of North America, Accompanied by a Map of North America.*—Prof. Paper 71, U. S. Geol. Surv., pp* 894.

Wilke, E.—*Ueber das Vorkommen von Rubidium in den Kalisalzlagerstätten;* [Presence of rubidium in the potash salines of Germany].—Kali, June1,1912; p. 245; 6500 w; 45c.

Wilson, E. B.—*Formation of Magmas.*—Mines & Minerals, Sept.,1912; p. 115; 1000 w; 35c.

Winchell, H. V.—*The St. Helen's Mining District;* [Tourmaline-bearing cupriferous veins in southwestern Washington].—Amer. Inst. of Mng. Engrs., Bull. 70, Oct.,1912; pp. 1037-1045*; $1.15.

Woelkow, A.—*Der Salzgehalt der Meere und seine Ursachen;* [The salt content of the ocean and its causes].—Petermann's Mittlngn., 1912; pp. 5-8; 75-76*; $1.

Zelaya, Cesar.—*The Chilean Saltpetre and Its Origin.*—Mex. Mg. Jnl., Dec.,1912; p. 28; 1250 w; 25c.

Ziegler, V.—*The Siliceous Oolites of Central Pennsylvania.*—Amer. Jnl. of Sci., Aug.,1912; p. 113-127*; 65c.

Zsigmondy, R.; W. Bachmann and E. F. Stevenson. — *Ueber einen Apparat zur Bestimmung der Dampferspannungsisothermen des Gels der Kieselsäure;* [Apparatus for determining the vapor tension isotherms of silicic acid gel].—Zts. f. anorgan. Chemie, 1912, No. 2; pp. 189-197*; $1.15.

———. *Gold in the Rand Banket;* [Sources].—S. Afr. Mng. Jnl., Aug.17,1912; p. 918; 1500 w; 35c.

———. *Lonely Reef;* [Rhodesia; enrichment of gold ores with depth].—Mng. Mag., June,1912; p. 405; 1000 w; table; 35c.

———. *Ore Deposits in the Transvaal;* [Geology of leading types].—S. Afr. Mng. Jnl., Aug.10,1912; p. 887; 3000 w*; 35c.

———. *Patricia District, Ontario.*—E. & M. J., Nov.23,1912; p. 973; 600 w*; 25c.

———. *Persistence of Rand Ore in Depth.*—S. Afr. Mng. Jnl., Oct.12, p. 176; 1300 w; 35c.

———. *The Dome Theory of Accumulation of Oil in the Gulf Coastal Plain;* [Discussion by A. F. Lucas and G. D. Harris; from "Science".—E. & M. J., July13,1912; p. 67; 600 w; 25c.

———. *The Grade of Rand Ore.*—S. A. Mng. Jnl., Oct.26,1912; p. 237; 1500 w*; 35c.

MINING GEOLOGY

See also Ore Genesis.

Arrhenius, S. and R. Lachmann.—*Die physikalisch-chemischen Bedingungen bei der Bildung der Salzlagerstätten und ihre Anwendung auf geologische Probleme;* [The physical-chemical conditions during the formation of saline deposits, with special reference to geologic problems and the Zechstein deposits].—Geol. Rundschau, 1912, Vol. 3, pp. 139-157; 75c.

Arrhenius, S.—*Uber die physikalische Bedingungen bei den Salzablagerungen zur Zeit ihrer Bildung und Entwickelung;* [Physical requirements for the genesis and development of saline deposits].—Kali, Aug. 1,1912; p. 361; 2700 w; 45c.

Bamberger, Clarence G.—*The Mining of Copper Deposits.*—Mex. Mg. Jnl., Dec., 1912; p. 19; 2000 w; 25c.

Barr, John Allen.—*Florida Phosphate Practice.*—M. & M., Dec.,1912; p. 265; 5000 w*; 35c.

Bartonec, Fr.—*Ueber die weitere Umgebung des mährisch-schlesisch-polnischen Kohlenbeckens;* [Stratigraphy, geology and distribution of coal seams in the Moravia-Silesia-Poland coal basin].—Oestr. Zts. f. Berg- & H-wesen, Apr.6,1912; pp. 185-190; Apr.13, pp. 203-205; Apr.20, pp. 221-222*; 95c.

Bastin, E. S.—*The Graphite Deposits of*

Ceylon.—Econ. Geol'y, Aug.,1912; pp. 419-443*; 65c.

Baum, Bergassessor.—*Die Bergwerksanlage Admiral bei Hörde;* [The Admiral mining plant at Hörde].—Glückauf, Nov. 30,1912; p. 1951; 5000 w*; 50c.

Baumgärtel, B.—*Der Oberharzer Erzbergbau;* [Mining industry of the Upper Hartz, Prussia].—Clausthal, 1912; $1.25; (book).

Beeler, Henry C.—*Geology of the South Pass District, Wyoming;* [Official report of state geologist; abstract].—Mg. Sci., Nov. 28,1912; p. 342; 1500 w*; 20c.

Bernoulli, W.—*Geologische Untersuchungen in der karpathischan Sandsteinzone bei Zboro, Nordungarn;* [Geological investigations for petroleum in the Carpathian sandstone zone near Zboro, north Hungary].—Basel dissert; 1912; 20 pp*; $1 (Thesis). Reprinted in Földtani Közlöny, Vol. 42, 1912; 75c.

Beyschlag, Fr.—*Was sind Geologie und Tiefbohrtechnik einander schuldig?* [What do geology and deep-drilling owe each other?; read to 26th convention Internatnl. Ver. d. Bohringr.].—Organ d. Bohrtechniker, Sept.15,1912; p. 206; 2100 w; 45c.

Blatchley, Raymond S.—*Structure of the Principal Oil Fields of Illinois.* (Paper read before Illinois State Academy of Science).—Mg. & Eng. World, Dec.14,1912; p. 1098; 2200 w*; 10c.

Blatchford, Torrington.—*The Asbestos Deposit at Soanesville, Pilbara Goldfield, W. Aust.* (West Australia Geological Survey Report; abstract).—Mg. Jnl. (London), Nov.30,1912; p. 1176; 1500 w; 35c.

Blatchford, T. and J. Y. Judson.—*The Mining Geology of the Kanowna Main Reef Line, Northeast Coolgardie Goldfield;* [with petrological notes by R. A. Farquharson, and chemical notes by F. S. Simpson].—W. Australia Geol. Survey, Bull.; 1912; $2.

Reprinted in W. Australian Mng. Jnl., May15,1912; p. 12; June1, p. 12; June8, p. 6; June15, p. 12; June22, p. 12; June 29, p. 12; July6, p. 12; July13, p. 20; July 20, p. 12; 30,000 w*; $1.50.

Blatchley, R. S.—*Illinois Oil Industry; Its History and Development.*—Mining & Engg. World, June22,1912; p. 1293; 3000 w*; 10c.

Blatchley, R. S.—*Oil Investigations in Illinois.*—Ill. Acad. of Sci., Trans.; Jan. 25,1912; pp. 85-96.

Blumenau, H.—*Einige weniger bekannte Erzlagerstätten Spaniens;* [Some of the lesser-known ore deposits of Spain].—Metall u. Erz, Nov.8,1912; p. 74; 2000 w; 50 cts.

Boden, K.—*Das Kupfererzvorkommen im untern Glindetale bei Niedermarsberg in Westfalen;* [The copper ore deposits of the lower Glinde valley, Westphalia].—Glückauf, June15,1912; pp. 957-947*; June22, p. 981-988*; 80c.

Bogdanowitsch, K. J.—[*The iron ores of Russia; geology, distribution, and supplies* (in Russian)].—St. Petersburg, 1911; 327 pp*; $3 (book).

Bond, Jos.—*Peculiarities in the Drift;* [Some irregular pay shoots in southwestern copper veins].—E. & M. J., Oct.12, p. 679; 2500 w*; 25c.

Bornhardt, W.—*Die Erzvorkommen des Rheinischen Schiefergebirges;* [Geology of the commercial lead and zinc lodes of the Rhenish slate formations; read to Ges. Deu. Metallhütten & Bergleute].—Metall & Erz, Oct.8, p. 2-11; 8000 w*; 45c. Abstract in Deu. Bergwerks Ztg., Oct.1, p. 1; 750 w; 35c.

Bosworth, T. O.—*Birth of an Island near the Coast of Trinidad.*—Geol. Mag., April, 1912; pp. 159-163*; 65c.

Bosworth, T. O.—*Outlines of Oilfield Geology.*—Geol. Mag., Vol. 9, 1912; pp. 16-23; 53-59; 90c.

Boutwell, J. M.—*Geology and Ore Deposits of the Park City District, Utah.*—U. S. Geol. Survey, Prof. Paper No. 77; 231 pp*; 20c.

Breger.—*Index to Oil Literature.*—See under "Petroleum and Oils."

Brewer, W. M.—*Mineral Resources of the Kenai Peninsula.*—M. & S. P., Nov.23,1912; p. 662; 1200 w; 20c.

Brock, R. W.—*Tin and Topaz in New Brunswick.*—Jnl. Mg. Soc., N. S., Vol. XVII, 1912; p. 50; 4 p; 50c.

Burrell, Geo. A.—*Natural Gas Investigations of U. S. Bureau of Mines.* (Paper read before the Natural Gas Assn. of Am.).—Nat. Gas Jnl., Dec.,1912; p. 589; 35c.

Butler, B. S.—*Geological Classification of Copper Deposits;* [From U. S. Geol. Survey, Mineral Resources for 1911].—Mining & Engg. World, Oct.26, p. 765; 2600 w; 10c.

Cairnes, D. D.—*Quartz Mining in the Klondyke District, Canada.* (Canadian Geol. Surv. report; abstract).—Can. Mg. Jnl., Dec.1,1912; p. 811; 6000 w; 30c.

Cairnes, D. D.—*Geology of a Portion of the Alaska-Yukon Boundary, Between Porcupine and Yukon Rivers.*—Canada Geol. Survey, Rep. f. 1911; 1912; pp. 17-33.

Calvert, W. R. and others.—*Geology of Various Lignite Fields in Montana.*—U. S. Geol. Survey, Bull. 471-D; 176 pp*; 10c.

Camsell, C.—*Fraser Canyon and Vicinity, B. C.; Lillooet Mining Division and Skagit Valley, B. C.*—Canada Geol. Survey, Rep. f. 1911; 1912; pp. 108-123*.

Chambers, D. M.—*Italy as an Oil-Producing Country.*—Pet. Wld. (London), Nov., 1912; p. 467; 2000 w*; 35c.

Choffat, P.—*Sur les sables aurifères, marins, d'Adica et sur d'autres dépôts aurifères;* [The beach placer sands of Adica and the west shore of Setubal peninsula, Portugal].—Portugal Service Geol., Communications, Vol. 9, 1911; pp. 1-27; $1.50.

Clapp, C. H.—*Southern Vancouver Island;* [Geology and mineral resources; coal; also gold, copper, iron, lime and cement, etc.].—Canada Dept. Mines, Geol. Survey Memoir No. 13; 1912; 208 pp*; 50c.

Clapp, F. G.—*Occurrences of Oil and Gas Deposits Associated with Quaquaversal Dips;* [Discusses chiefly saline dome oil fields of Louisiana and Texas, and volcanic-neck type in Tamaulipas-Vera Cruz district, Mex.].—Econ. Geol'y, June,1912; pp. 364-381*; 65c.

Clapp, C. H.—*Geology of Nanaimo Sheet. Nanaimo Coal Field;* also, *Geology of the Comox and Suquash Coal Field, Vancouver I'd., B. C.*—Canada Geol. Surv., Rep. f. 1911, p. 91-107*.

Collins, W. N.—*Geology of Onaping Sheet, Ontario;* [Shining Tree and West Shining Tree gold fields].—Canada Geol. Survey, Rep. f. 1911; 1912; pp. 244-253.

Craig, E. H. C.—*Oil Finding;* [Geology, genesis and prospecting of oil pools].—London, 1912; pp. —; $2.75 (book).

Reviewed in London Mng. Jnl., June22, 1912; p. 617; 4500 w; 35c.

Crane, G. W.—*The Iron Ores of Missouri.*—Mo. Bur. of Geol'y & Mines, Reports, Vol. X, 2d Series; 1912; 434 pp.* (book).

Dalton, L. V.—*Geology of Venezuela;* [Economic geology of coal, iron, gold, copper, oil].—Geol. Mag., May,1912; pp. 203-210; 65c.

Daly, R. A.—*The Nature of Volcanic Action.*—Amer. Acad. of Arts & Scis., Proc.; Vol. 47; 1911; pp. 47-122. Reviewed in Jnl. of Geol'y, July-Aug.,1912; p. 471; 1400 w; 65c.

Davidson, Chas.—*The Origin of Earthquakes.*—London and Cambridge, 1912; 150 pp*; 75c; (book).

Deguichi, Y.—*The Enargite Deposit in Taiwan.*—Geol. Soc. of Tokyo, Jnl.; 1912; Vol. 19; pp. 13-15.

Denison, F. N.—*Earthquakes, Strains and Stresses in Relation to Colliery Explosions.*—Canadian Mng. Inst., Trans.; Vol. 15, Pt. 1; 1912; pp. 26-31; $1.15.

Deustua, R. A.—*The Oil Industry in Peru.* (Boletin de la Sociedad Nacional de Minera, Santiago de Chile, 1912; abstract).—Mg. Jnl. (London), Nov.30,1912; p. 1168; 2000 w; 35c.

Dieckmann, W.—*Die geologischen Verhältnisse der Umgebung von Melilla unter besonderer Berücksichtigung der Eisenerzlagenstätten Beni-Bu-Ifrur;* [Geology of the Melilla district, Morocco, with special reference to the Beni-Bu-Ifrur iron ore deposits].—Dresden Techn. Hochschule & Freiberg Bergakad. Dissert., 1912; 22 pp; 11 figs; $1.50 (Thesis).

Elsden, J. V.—*Principles of Chemical Geology.*—London, 1912; $1.75 (book).

Engler, C., and S. Bobrzynski.—*The Origin and Optical Activity of Petroleum;* [from "Petroleum Review"].—Oil Age, Aug. 23,1912; p. 1; 2100 w; 20c.

Evans, G. W.—*The Coal Fields of King County.*—Washington Geol. Survey, Bull. 3, 1912; 247 pp.*; 85c.

Farrell, J. H., and A. J. Moses.—*Practical Field Geology* (by Farrell), *Including a Guide to the Sight Recognition of 120 Common or Important Minerals* (by Moses).—New York, 1912; 273 pp.; $2.50 (book).

Feust, Arthur.—*The Chontales Mining District, Nicaragua.*—M. & S. P., Dec.7, 1912; p. 720; 2500 w*; 20c.

Friedensburg, Dr.—*Der Erzbergbau in Cornwall und Devonshire;* [The mining industry in Cornwall and Devonshire; reviews geology, mines, mining and milling, and production of tin, copper, arsenic, tungsten, uranium].—Glückauf, June29,1912; p. 1029-1041*; 50c.

Frentzel, A.—*Die Oelfelder von Gurien;* [The Guria oilfields, Kutai, Russia; chiefly geologic].—Petroleum, Sept.4, p. 1301; 2000 w*; 45c.

Gale, H. S.—*Nitrate Deposits;* [Chile and U. S. (Wyom., Colo., Utah, Idaho, Oreg., Nev., Cal., Ariz., N. Mex., Tex.); B. C.; geology].—U. S. Geol. Survey, Bull. 523; 1912; 36 pp*; 10c.

Gould, C. N.—*The Geology of Natural Gas;* [Read to Nat. Gas Asso., May,1912].—Oil Age, July5,1912; p. 7; p. 9; July12, p. —; 5000 w; 30c.

Goüin, —. *Les mines de pyrite de la région de Huelva;* [The pyrite mines and industry of the Huelva region, Spain; with notes on the pyrite of the world's other districts].—Soc. de l'Ind. Minérale St. Etienne, Bull., Oct.,1912; pp. 341-386*; Nov., pp. —; $2.

Grosch, P.—*Roteisensteinlager in Asturier;* [Geology and genesis of the red hematites of the Asturias, Spain].—Zts. f. prakt, Geol., May,1912; p. 201; 2000 w*; 75c.

Grothe, A., and Salazars, L.—*La Industria Minera de México: Tomo I—Estados de Hidalgo y de México;* [The mining industry of Mexico: Vol. I—States of Hidalgo and Mexico].—Mexico City, 1912; 304 pp*; $1.50.

Häberle, D.—*Die Mineralquellen der Rheinpfalz und ihrer nächsten Nachbargebiete in geologisch-historischer Beziehung;* [Geology and history of the mineral springs in the Rheinpfalz region, south Germany].—Kaiserslautern, 1912; 103 pp*; $1.50 (book).

Harvie, Rob.—*Geology of Orford Map Area, Quebec; Southern Portion of Serpentine Belt;* [Chiefly copper].—Canada Geol. Survey, Rep. f. 1911; 1912; pp. 286-293.

Hautpick, E. de.—*Platinum and the Platinum Group;* [The metals; geology and genesis of lodes and placers].—Mng. Jnl., July13,1912; p. 698; July27, p. 747; 4500 w; 50c.

Hershey, O. H.—*The Belt and Pelona Series;* [Geology of sedimentary formations in Coeur d'Alenes, Idaho].—Amer. Jnl. of Sci., Sept.,1912; pp. 263-273; 5000 w; 65c.

Hill, J. M., and W. Lindgren.—*The Mining Districts of the Western U. S.,* by Jas. M. Hill; *With a Geologic Introduction,* by W. Lindgren; [Directory of mining districts in Ariz., Cal., Colo., Ida., Mont., Nev., N. Mex., Oreg., S. Dak., Tex., Utah, Wash., Wyom., with location of each, outline of geology, and references to literature].—U. S. Geol. Survey, Bull. 507; 1912; 309 pp*; 20c.

Hill, J. M.—*Notes on the Northern La Sal Mountains, Grand County, Utah.*—U. S. Geol. Survey, Bull. 530-M; 1912; 22 pp.*; 10c.

Hinterlechner, K.—*Geologische Mitteillungen über ostböhmische Graphite;* [Geological notes on the east Bohemian graphites and their stratigraphic significance over a part of the Bohemian crystalline massif].—K. K. Geol. Reichs-Anst., Verhandl., 1911, No. 16; pp. 365-380*; $2.

Höfer, H. von.—*Temperature in Oil Regions.*—Economic Geol'y, Sept.,1912; pp. 536-541; 65c.

Hornaday, W. D.—*The Santa Maria Graphite Mines, Mexico.*—Mg. & Eng. World, Dec.7,1912; p. 1041; 3000 w*; 10c.

Jarvis, R. P.—*The Valley and Mountain Iron Ores of East Tennessee.*—Resources of Tenn., Sept.,1912; pp. 326-368*; 50c.

Jones, J. Claude.—*Origin of the Anhydrite at the Ludwig Mine, Lyon County, Nev.;* [also at Lovelock and Mound House].—Econ. Geol'y, June,1912; p. 400; 1200 w; 65c.

Joralemon, Ira B.—*Geology Applied to Mine Examination;* [Read to Phelps-Dodge Geologic Conference, Morenci, Ariz.].—E. & M. J., Aug.10,1912; p. 247; 3600 w; 25c.

Jordon, F. A.—*Moose Mountain Iron Mine, Canada.*—Can. Mg. Jnl., Dec.1,1912; p. 807; 5000 w; 30c.

Keating, John.—*Prospecting for Tin in Nigeria.*—Mg. Mag., Nov.,1912; p. 363; 1000 w*; 45c.

Keller, Harry F.—*Platinum: The Most Precious of the Metals.*—Jnl. Fr. Inst., Nov.,1912; 20 pp*; 75c.

Kessler, P. and H. Willing.—*Die geologische, mineralogische und paläontologische Literatur des Saarbeckens bis zum Jahre*

1910; [Bibliography of geological, mineralogical and paleontological literature of the Saar district up to 1910].—Saarbrücken, Germany, 1912; 138 pp; $2 (book).

Koehne, W.—*Geologie des Peissenberger Kohlenreviers;* [Geology of the Peissenberg coal field, south Germany].—Geogn. Jahresh, 1911, pp. 209-212; 75c.

Kramm, H. E.—*Geology of Harrison Gulch, Shasta County, California;* [Gold pocket deposits].—Amer. Inst. Mng. Engrs., Bull. 67; July,1912; pp. 709-717*; $1.15.

Krümmer, A.—*Historische Entwickelung und Definition der hauptsächlichsten tektonischen Begriffe in Bergbau und Geologie;* [Historical development and definition of the principal tectonic conceptions in geology and mining,—dislocations, folds, faults, thrust, slaty cleavage, schistosity].—Zts. f. prakt. Geologie, July,1912; pp. 249-265; 75c.

Krusch, P.—*Das Kent-Kohlenfeld, seine stratigraphischen und tektonischen Verhältnisse im Vergleich mit denen des westfälischen Steinkohlengebietes;* [The Kent coalfield, and its geologic relations with the coalfields of the Westphalia-Calais region].—Glückauf, July6,1912; pp. 1069-1078*; 50c.

Kukuk, —. *Der südlichste Zechsteinaufschluss im Deckgebirge des rechtsrheinischen Steinkohlengebirges;* [The southernmost capping of Magnesian Limestone overlying the Carboniferous coal field of the Right Rhine; read to Niderrrhein. Geol. Ver; abstract].—Glückauf, June8,1912; p. 908; 1500 w*; 50c.

Kuntz. — *Geologische Verhältnisse des Kaokofeldes;* [Geology of the Kaoko-Otavi region, German SW. Africa; read to Deu. Geol. Ges; brief abstract].—Glückauf, July 27,1912; p. 1214; 1000 w; 45c.

Lakes, A., Sr.—*Geology of the Nickel Plate Gold Mine at Hedley, B. C.*—B. C. Mng. & Engg. Record, July,1912; p. 386; 1800 w; 35c.

Lane, A. C.—*The Keweenaw Series of Michigan;* [Exhaustive monograph of geology of the copper rocks, with comparisons with New Jersey, Bolivia and Oberstein, Germany; Appendix, *The Development of the Copper Mines of Lake Superior and Their Geological Relations,* by A. H. Meuche; pp. 887-931].—Mich. Geol. Survey, Publication No. 6; 2 volumes and atlas; 1912; 983 pp.*.

Lawson, A. C.—*The Archaean Rocks of Rainy Lake* [Goldfield, Ont.].—Canada Geol. Survey, Rep. f. 1911; 1912; pp. 240-244.

Lazarevic, M. and E. Kittl.—*Die Wismutgänge von Aljin-Dol und Jasikova;* [Geology of the gabbros and bismuth deposits of Aljin-Dol and Jasikova, Servia].—Zts. f. prakt. Geol., July,1912; p. 280-287*; 75c.

Leach, W. W.—*Geology of Blairmore Map Area, Alberta;* [Coal, iron and cement].—Canada Geol. Survey, Rep. f. 1911; pp. 192-201*.

Lee, M. L.—*Geological Study of the Elisa Mine, Cananea, Mex.*—Econ. Geol'y, June, 1912; pp. 324-339*; 75c.

LeRoy, O. E.—*Geology and Ore Deposits of Phoenix, B. C.*—Mg. & Eng. World, Nov. 16,1912; p. 910; 3000 w*; 10c.

Linton, R.—*Geology of Ocampo District, Chihuahua;* [Silver-gold in fault planes in andesite].—E. & M. J., Oct.5,1912; p. 653; 2200 w*; 25c.

Loveman, M. H.—*Geology of the Miami Copper Mine.*—M. & S. P., Aug.3,1912; p. 147; 2200 w*; 20c.

Lowe, E. N.—*Iron Ores of Marshall and Benton Counties.*—Mississippi Geol. Survey, Publication; 1912, 24 pp.; 50c.

Lucas, A. F.—*The Dome Theory of the Coastal Plain.*—Science, N. S., Vol. 35, 1912; pp. 961-964; 50c.

Maddren, A. G.—*Geologic Investigations along the Canada-Alaska Boundary;* [from Porcupine River district north].—U. S. Geol. Survey, Bull. 520-K; 1912; 20 pp.; 10c.

Manning, Isaac A.—*Metals and Minerals of Colombia;* [Consular report; abstract].—Mg. Sci., Nov.28,1912; p. 343; 1500 w; 20c.

Marin, A.—*Las minas de calafatita de Benahadux;* [The calafatite (alunite) mines of Benahadux, Almeria; geology].—Inst. Geol. Espana, Bol.; Vol. 32; 1911-1912; pp. ——.

Maufe, H. B., and Lightfoot.—*The Geology of the Country Around Selukwe;* [Chromite in serpentine and schist; gold in granite].—Geol. Survey of South Rhodesia, Rep. f. 1911; pp. —; $1. Abstract in S. Afr. Mng. Jnl., Aug.31, p. 989; 3000 w; 35c.

Maufe, H. B.—*The Geology of the Victoria Tin Field.*—Geol. Survey of South Rhodesia, Report f. 1911; pp. —; $1.

McConnell, R. G.—*Reports on Observatory Inlet, Salmon River District, and Portland Canal Districts, B. C.*—Canada Geol. Survey, Rep. f. 1911; 1912; pp. 41-70*.

McIntyre, Wm., Jr.—*Battle Creek Coal Mine, Tennessee.*—M. & M., Dec.,1912; p. 237; 3000 w*; 35c.

Miller, W. J.—*The Garnet Deposits of Warren County, N. Y.*—Econ. Geol'y, Aug., 1912; pp. 493-501*; 65c.

Müller, C.—*Die Erzlagerstätten von Traversella im Piemont, Italien;* [Geology of the magnetite and pyrite mines and ore bodies at Traversella, Piedmont, Italy].—Zts. f. prakt. Geol., June,1912; pp. 209-240*; 75c.

Olver, J. S.—*Rand Geological Controversy; the Rietfontein Fault.*—S. Afr. Mng. Jnl., June22, p. 617, June 29, p. 651; 5000 w; May18,1912; p. 425; 5000 w; $1.05.

Paige, S.—*Origin of Turquoise in the Burro Mountains, N. Mex.*—Econ. Geol'y, June,1912; pp. 382-392*; 65c.

Paige, S.—*The Geological and Structural Relations at Santa Rita (Chino), New Mexico.*—Economic Geol'y, Sept.,1912; pp. 547-559*; 65c.

Pálfy, M. von.—*Geologische Verhältnisse und Erzgänge der Bergbaue des siebenburgischen Erzgebirges;* [Geological relations of ore bodies and mines in the Transylvanian Erzgebirge; transl. from the Hungarian of the Ungar. Geol. Ges., 1911].—Budapest, 1912; 297 pp; $7 (book).

Potonié, H.—*Ueber die Entstehung der Steinkohle;* [The origin of coal; read to the 26th Wandersammlung Internatnl. Ver. Bohringr. & Bohrtechniker].—Organ d. Bohrtechniker, Oct.1, p. 221; Oct.15, p. —; 5000 w; 50c.

Prouty, Wm. Frederick.—*Map of the Coosa Coal Field (Alabama), with Vertical and Horizontal Sections.*—Geological Survey of Alabama.

Prutzman, P. W.—*History and Geology of the California Oil Fields.*—Mining & Engg. World, June22,1912; p. 1287; 7500 w; 10c.

Purdue, A. H.—*The Zinc Deposits of Northeastern Tennessee.*—Mng. Sci., Oct.17, p. 249; 3000 w*; 20c.

Rice, C. T.—*Copper Mining Practice at Lake Superior;* [I: Northern mines, 30-40° dip; ore-bodies; hoisting].—E. & M. J., July20,1912; p. 119-124; 5500 w*; 25c.

Rigaud, F.—*Alluvions métallifères;* [Geology, prospecting and development of placer deposits].—Rev. Univ. d. Mines, May, 1912; 53 pp*; $1.15.

Rubio y Munoz.—*Geology of Guelaya, Morocco;* [Spanish].—See under Lead.

Sales, R. H.—*Review of Butte Geological Report;* [S. Weed's].—E. & M. J., Oct.19, p. 729; 4200 w; 25c.

Schneider, O.—*Die Förderung der Geologie durch Tiefbohrungen;* [Advances in geological science affected by borings; read to 26th convention, 1912, Internatnl. Ver. Bohrtechniker].—Organ d. Bohrtechniker, Nov.1, p. 245; 4300 w; 35c.

Schwarz, E. H. L.—*South African Geology.*—London, 1912; pp.—; (book).

Sheldon, G. L.—*Badirahuato District, Sinaloa, Mex.*—E. & M. J., Nov.23,1912; p. 992; 2500 w; 25c.

Siegfried, E.—*Die Naphthalagerstätten der Umgebung von Solotwina;* [Geology and tectonics of the Solotwina oil field, east Carpathians, Galicia].—Petroleum, July3, 1912; p. 1049; July17, p. 1106; July31, p. —; 21,000 w*; 95c.

Slavik, F.—*Das Goldvorkommen von Rondny;* [Geology of the gold occurrences about Rondny, Bohemia.—Prague, 1912; 23 pp*; 75c.

Statz, B. A.—*Geology of the Cochiti Mining District, N. Mex.;* [Gold-silver in monzonite].—Mng. Sci., Oct.31,1912; p. 276; 1500 w*; 20c.

Steel, A. A.—*Coal Mining in Arkansas, Volume* 1.—Ark. Geol. Survey, Report; 1912; 632 pp*; (book).

Sterrett, D. B.—*Mica in Idaho, New Mexico and Colorado;* [In Latah, Rio Arriba and Mesa counties, respectively].—U. S. Geol. Survey, Bull. 530-L, pp. 7-22*; 10c.

Stoek, H. H.—*Geology, Mining and Preparation of Anthracite.*—Western Soc. of Engrs., Jnl.; Oct.,1912; p. 705-735*; 65c.

Stose, G. W.—*Geology of the Salt and Gypsum Deposits of Southwestern Virginia.*—U. S. Geol. Survey, Bull. 530-N; 1912; pp. 14-37*; 10c.

Szajnocha, L.—*Das Erdölvorkommen in Galizien in Lichte neuer Erfahrungen;* [Geology genesis and production of petroleum in Galicia].—Geol. Ges. Wien, Mittlngn; Vol. 4, 1911; pp. 17-36.

Thiel, G.—*Das Asphaltkalkgebiet des Pescaratales am Nordabhange der Majella;* [The geology and genesis of the asphaltic limestones of Pescara valley, north slope of the Majella, Abruzzi, Italy].—Zts. f. prakt. Geologie, May,1912; p. 169; 16,000 w*; 75c.

Tolman, C. F.—*The Teaching of Economic Geology.*—Econ. Geol'y, June,1912; pp. 393-399; 65c.

Tuttle, Edgar G.—*The Magdalena Mining District, N. Mexico.*—M. & M., Dec.,1912; p. 275; 35c.

Ungermann, Cl.—*Allgemeiner Naphtha Geologe;* [Petroleum Geology].—Vienna, 1912; pp. —; 60 figs.; $2.75 (book).

Villaron, J. R.—*Informe acerca de la naturaleza de los minerales de hierra de Mayari;* [Origin of the Mayari iron ores from lateritization of serpentine].—Soc. Cubana de Ing., Rev.; Vol. 4, 1912; pp. 31-47.

Walther, Dr. Karl.—*Zur Geologie der Gegend von Seibal und ihrer Kuppererzlagerstätten im Staate Rio Grande do Sul;* [Concerning the geology of the region of Seibal, state of Rio Grande do Sul (Brazil), and its deposits of copper ore].—Zts. für praktische Geologie, Oct.,1912; p. 404; 7000 w*; 75c.

Ward, L. K.—*The Mt. Balfour Mining Field.*—Tasmania Dept. Mines, Bull. 10; 1912; 165 pp*; $1.

Weaver, C. E.—*Geology and Copper Ore Deposits of the Index Mining District, Washington.*—Washington Geol. Survey, Bull. No. 7; 1912; 91 pp*; 75c.

Weed, W. H.—*Is Geology a Success as a Guide to Ore Deposits?* [Bisbee, Ariz., and inadequacy of geology in predicting irregular ore-bodies and ore reserves].—Mining & Engg. World, Aug.10,1912; p. 245; 2400 w; 10c. Reprinted in Mines & Methods, Aug., p. 559; 2400 w; 20c.

Weed, W. H.—*Source of Copper in the Ores at Butte, Montana;* [From U. S. Geol. Survey Prof. Paper No. 74].—Mining & Engg. World, Aug.31,1912; p. 388; 3200 w; 10c.

Wegemann. C. H.; C. E. Jamison, and A. C. Veatch.—*Geology of Wyoming's Leading Petroleum Sections.*— See under Geology.

White, A. G.—*Notes on the Zomelahuacan Mining District, State of Vera Cruz* (Mexico).—Informes y Memorias del Instituto de Minas y Metalurgia, Vol. 3, No. 1, 1912-1913, p. 49; 1600 w; 50 cts.

Willert, H.—*Geologie der fünf grosser preussischen Steinkohlenablagerungen;* [Geology of the 5 major coal fields of Prussia].—Leipzig, 1912; $1.75 (book).

Wilson, J. B.—*The Hargraves Goldfield, N. S. Wales;* [Saddle reefs, and geologic similarity to Bendigo].—Mng. & Engg. Rev., Oct.,1912; p. 11; 2800 w*; 35c.

Winchell, Alexander H.—*Geology of the National Mining District, Nevada.*—M. & S. P., Nov.23,1912; p. 655; 5000 w*; 20c.

Wittich, Lucius L.—*The Hamilton No. 8 Mine, Kansas.*—M. & M., Dec.,1912; p. 255; 1500 w*; 35c.

Wolf, W. A.—*Sketch of the Geology of Equador;* [Goldfields; from T. Wolf's "Geografia y Geologia"].—M. & S. P., July 27,1912; p. 110; 1500 w*; 20c.

Woodward, Harry P.—*The Poonah Tin Field, W. Aust.*—W. A. Mg., B. & Eng. Jnl., Oct.19,1912; p. 12; 2500 w; 35c.

Woodruff, E. G. and D. E. Winchester.—*Coal Fields of the Wind River Region, Fremont and Natrona Counties, Wyom.*—U. S. Geol. Survey, Bull. 471-G; 1912; 53 pp*; 20c.

Young, G. A.—*Geology of the Moncton Map Area, Westmoreland and Albert Counties, N. B.;* [Chiefly oil and gas].—Canada Geol. Survey, Rep. f. 1911; 1912; pp. 309-322.

Zapffe, C.—*Geology of the St. Helens Mining District of Washington.*—Econ. Geol'y, June,1912; pp. 340-350; 65c.

Zuber, R.—*Geologische Beobachtungen aus West Afrika;* [Geology of the flysch-like deposits of bitumen and petroleum along the Guinea Coast, W. Africa].—K. K. Geol. Reichs-Anst., Verhandl; 1911; pp. 89-106.

"G. R."—*Far Eastern Rand Geology;* [Stratigraphy and Continuity of the Van Ryn Reef to New Rietfontein].—S. Afr. Mng. Jnl., July13,1912; p. 743; 2400 w; 35c.

"Rhinesuchus."—*Geology of the Witwatersrand;* [Criticism of Olver's works].

—S. Afr. Mng. Jnl., July13,1912; p. 737; 2000 w; 35c.

———. *Coal Mining.*—Sci. & Art of Mining, Nov.23,1912; p. 174; 1200 w*; 25c.

———.*Geology of the Witwatersrand.*—S. Afr. Mng. Jnl., Anniversary No., Sept., 1912; p. 343; 3000 w*; $1.

———. *The Derdepoort Geological Problem;* [Petrology of the hard blue rock; breccia or kimberlite?].—S. Afr. Mng. Jnl., July27,1912; p. 805; Aug.24, p. 950; 3000 w; 50c.

———. *The Transvaal Tin Deposits;* [Geology of Waterberg district].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 169; 7000 w*; $1.

LAW; LEGISLATION; TAXATION

See also Prospects and Prospecting.

Aguillon, L.—*Exposé de la taxation des mines dans les divers pays;* [Review of mines taxation in the various countries; German states, Argentina, Austria, Belgium, Bosnia, Herzogowina, Bulgaria, Chile, Spain, U. S., France, Gt. Britain, Greece, Italy, Luxembourg, Mexico, Portugal, Holland, Peru, Roumania, Russia, Servia, Sweden, Switzerland, Turkey, Uruguay, Venezuela; also colonial dependencies of countries named].—Annales d. Mines (Paris), Sept.,1912; pp. 208-279; 95c.

Aguillon, L.—*Recueil des textes officiels relatifs à l'exploitation des mines de combustibles;* [Collection of French regulations governing coal mining].—Paris, 1912; 330 pp.; $2.00; (book).

Berckhoff, —. *Der Bergbau und das Reichszuwachssteuergesetz;* [Mining and the German law of Feb. 14, 1911, taxing unearned increments].—Glückauf, Nov.9, p. 1836-1843; 50c.

Bienhold, Dr.—*Wertzuwachssteuer und Kaliindustrie;* [The German law of Feb. 14, 1911, taxing unearned increment, and its effect on potash lands and potash mining].—Deu. Bergwerks Ztg., Aug.31,1912; p. 1; 1500 w; 35c.

Blauhorn, J.—*Das Recht der Rohölgewinnung in Oesterreich;* [Laws and regulations governing the petroleum industry in Austria; Vol. I: Laws and ministerial regulations; Vol. II: Mines inspection regulations].—Vienna, 1911; pp. 150 and 101; $2 (books).

Böker, H. E.—*Die Besteuerung des Steinkohlenbergbaues in Elsass-Lothringen;* [The taxation of coal mining in Alsace-Lorraine]. — Glückauf, Nov.23,1912; p. 1917; 8000 w*; 50c.

Booth, M.—*Mining on Forest Reserves;* [Discusses regulations, and conditions in Colorado].—E. & M. J., June22,1912; p. 1215; 1600 w*; 25c.

Brassert, K., and H. Gottschalk.—*Allgemeines Berggesetz für die preussischen Staaten;* [General Mining Law of the Prussian States, with Commentary; by K. Prassert; 2d enlarged edition, by H. Gottschalk].—Bonn. 1912; $6 (book).

Callbreath, J. F.—*Work of the American Mining Congress.*—Mg. & Eng. World, Nov. 16,1912; p. 887; 3000 w*; 10c.

Carol, P.—*Le nouveau régime des concessions minières en France;* [The new French practice in granting mining concessions on public lands].—Rev. Ind'l du Centre, July13,1912; p. 6; 2000 w; 35c.

Chance, H. M.—*Appraisement of Michigan Coal Lands.*—Coal Age, July6,1912; p. 13; July13, p. 51; 5000 w; 30c.

Evans, Sam.—*Free Trade and Protection in South Africa; Rhodes vs. Cullinan.*—S. Afr. Mng. Jnl., Anniversary No., Sept., 1912; p. 109; 2500 w; $1.

Herzig, C. S.—*Mining Law in Nigeria.*—Mng. Mag., July, p. 53; 3500 w*; 45c.

Hoover, H. C. and L. H.—*Notes on Historical Development of Mining Law.*—E. & M. J., Nov.2, p. 823; 4500 w; 25c.

Jarvis, C. E.—*Assessment of Mining Properties;* [Read to County Assessors' Asso. of Calif.].—M. & S. P., Aug.17,1912; p. 210; 1100 w; 20c.

Lane, A. C.—*Taxation Value of Mineral Rights.*—E. & M. J., Nov.9, p. 897; 3100 w*; 25c.

Martell, P.—*Zur Geschichte der Bergwirtschaft des russischen Reiches;* [History of the mining industry in Russia; regulations; Donetz coal field; Siberian gold fields].—Bergwirtsch. Mittlngn., May,1912; pp. 75-81; 6000 w; 75c.

MacSwinney, R. F., and P. Lloyd-Greame.—*The Law of Mines, Quarries and Minerals;* [British].—London, 1912 (4th edition); pp. —; $13 (book).

MacSwinney, R. F., and P. Lloyd-Greame.—*The Coal Mines Act of* 1911 *and Other Acts Affecting Mines and Quarries.*—London,1912; pp. —; $1.75 (book).

Merrill, F. J. H.—*The Miners' Side of the East Tintic Decision.*—M. & S. P., Sept. 7,1912; p. 303; 2800 w; 20c.

Montgomery, A.—*Australian Mining Laws;* [Reply to circular letter of Mng. & Met'g'l Soc. of Amer. regarding proposed revision of U. S. mineral land laws].—M. & S. P., Aug.3,1912; p. 141; 3000 w; 20c.

Morrison, R. S.—*The New Alaska Placer Law.*—Mng. Sci., Aug.29,1912; p. 138; p. 129; 1000 w; 20c.

Nicholson, Neil A.—*Conservation of Nova Scotian Coal Fields.*—Jnl. Mg. Soc., Nova Scotia, Vol. XVII, 1912; p. 17; 10 p; 50c.

Obalski, J.—*Mining Laws and Early Mining Legislation in Quebec.*—Canadian Mng. Jnl., July1,1912; p. 431-432; 1500 w; 25c.

Peters, R. B.—*Das Bergwesen in Deutsch Südwestafrika;* [Mining law in German Southwest Africa].—Swakopmund, 1912; 464 pp.; 2 maps; $3.50 (book).

Püz, O.—*Das Rettungswesen im Bergbau;* [Mine Rescue Work; technology and legal requirements in Germany and other nations].—Freiberg, 1912; 178 pp.; 150 figs.; $1.50.

Raymond, R. W.—*Natural Resources and the Federal Government;* (Transactions Am. Inst. Mg. Eng.; abstract).—Mg. & Eng. World, Nov.16,1912; p. 899; 4500 w; 10c.

Requa, M. L. and others.—*Discussion on Proposed Legislation Concerning Government Restrictions in Disposing of Oil Lands;* [San Francisco section of Mng. & Met'g'l Soc. of America, May6,1912].—M. & M. Soc. of Amer., Bull. 49, June30,1912; pp. 125-138; 35c.

Rice, Claude T.—*Protecting Small Stockholders in Mining Companies.*—Mg. & Eng. World, Nov.16,1912; p. 895; 4000 w; 10c.

Rieger, S.—*Zur Wasserrechtsreform und Wasserkraftnutzung;* [Water rights and water-power development, and their effect on mining and metallurgy in the Alps and other parts of Austria].—Oestr. Zts. f. Berg- & H-wesen, May18,1912; p. 273; May25, p. 288; June2, p. —; 6500 w; $1.

Saueracker, —. *Ueber die Benutzung des Wassers für Grubenzwecke;* [German mining law on the utilization of waters for

mining purposes]. — Bergrechtl. Blätter, 1912; Nos. 3, 4; pp. 177-234; 75c.

Sheldon, G. L.—*As to Prospecting;* [Criticises administration of mineral-land laws by U. S. Land Office and Forest Service].—E. & M. J., July6,1912; p. 5; 1000 w; 25c.

Smith, G. O.—*Mineral Land Laws and the Geological Survey;* [Discusses withdrawal policy of the Survey].—Mining & Engg. World, Oct.26, p. 761; 3300 w; 10c.

Smith, Alex.—*Recent Legislation in Regard to Lands and Mines;* [British; chiefly on taxation; read to Instn. of Mng. Engrs.].—Iron & Coal Trades Rev., Sept.13,1912; p. 375; p. 382; 6000 w; 35c. Also in Coll'y Guardn., Sept.13, p. 529; Sept.20, p. 580; 7000 w; 50c.

Voelkel, —. *Die absolute und relative Bauwürdigkeit;* [Absolute and relative value or profitability of prospects and mineral occurrences; review of Prussian and European mining law on discovery rights, with special reference to probable "valuable nature" of mineral discoveries].—Zts. f. Bergrecht, Vol. 53, No. 3; 1912; pp. 349-361; 75c.

Woodbury, T. D.—*Free Use of Timber from Public Lands;* [Review of U. S. laws, amendments, and regulations applying to prospectors and mining men].—M. & S. P., June15,1912; p. 831; 2000 w; 20c.

Zervaès, Alex.—*La legislation des mines en Angleterre;* [Mining laws of Gt. Britain].—Paris, 1912; 276 pp.; $1 (book).

———. *Assessments of Profits in the Coal and Iron Industries;* [British income tax report for 1911].—Iron & Coal Trades Rev., Oct.4, p. 550; 500 w; 45c.

———. *Bergbau und Reform der direkten Steueren in Elsass-Lothringen;* [Iron mining and reform of direct taxation in Lorraine].—Deu. Bergwerks Ztg., July13, 1912; p. 1; 1500 w; 35c.

———. *Die neue rumänische Bergpolizeireglement;* [The new Roumanian mining regulations, with special reference to oil fields].—Allgm. Oestr. Chemiker Ztg., Sept. 15,1912; p. 137; Oct.1, p. —; 3000 w; 75c.

———. *Government's Land Lease Proves Imposible;* [Adverse discussion of the government's lease to the Owl Creek Coal Co. in Wyoming].—Black Diamond, Oct.19, p. 15; p. 31; 5000 w; 30c.

———. *Increased Stringency of Transvaal New Regulations.*—Mining & Engg. World, Sept.7,1912; p. 444; 4000 w; 10c.

———. *Mineral Land Laws and Development of Cuba.*—Mining & Engg. World, June29,1912; p. 1343; 600 w; 10c.

———. *Mining Royalties;* [Discussion of final report of Royal Commission on Mining Royalties, 1893, reprinted in 1912 as Cd. 6980; royalties, and separation of surface and mineral rights].—Coll'y Guardn., May24,1912; p. 1045; 3000 w; 30c.

———. *Queensland Mineral Land Law.*—M. & S. P., Oct.5, p. 440; 600 w; 20c.

———. *Taxation of Mineral Properties in Michigan.*—Mining & Engg. World, Oct. 5,1912; p. 618; 800 w; 10c.

———. *Reduction of Tax Valuation of Michigan Mines.*—E. & M. J., Nov.16, p. 948; 800 w; 25c.

———. *State Aid to Mining; Westralia's Example.*—S. Afr. Mng. Jnl., Sept.28, p. 108; 1000 w; 35c.

———. *Test of Mineral Leasehold in New Zealand;* [Discusses Veatch's report on leasing system in Australia].—Oil Age, June14,1912; p. 1; 1100 w; 20c.

———. *The Incidence of the Profits Tax;* [Income or profits tax of Rand Mines in 1911].—S. Afr. Mng. Jnl., Oct.5, p. 142; 1200 w; 35c.

———. *The Smoot Bill;* [Discusses bill for leasing Alaska coal lands].—Coal Age, July27,1912; p. 125; 1000 w; 20c.

———. *Zum Schleppmonopolgesetz;* [The proposed German law monopolizing towage on canals and rivers, and opposition of the mining interests thereto].—Deu. Bergwerks Ztg., Oct.29,1912; p. 1; 5000 w; 35c.

CONSERVATION

Betts, A. G.—*Utilizing Unmined Coal for the Production of Gas;* [Betts 1909 U. S. patent for mine-burning of tin or low-grade seams].—Jnl. of Gas Lightg., No. 2552, 1912; pp. 95-96*; 50c.

Ciamician, G.—*Photochemistry and Conservation of Solar Energy;* [Read to International Congr. of Appl. Chem'y; abstract].—Met. & Chemi. Engg., Sept.12,1912; p. 642; 4000 w; 35c.

Dawe, W. H.—*Mine Life Estimates;* [Mines of Neumann group, Witwatersrand].—S. Afr. Mng. Jnl., May18,1912; p. 412; 750 w; 35c.

Eckel, E. C.—*Iron Ore Reserves;* [Holdings and probable duration of principal companies in U. S. and Cuba].—Engg. Mag., Aug.,1912; pp. 665-674; 35c.

Fisher, W. L.—*Government Policy and Coal Lands;* [Reply to Congressman Mondell on alleged over-valuation of public coal lands, especially in Wyoming].—M. & S. P., Aug.31,1912; p. 271; 1800 w; 20c.

Griffith, Wm., and E. T. Connor.—*Our Anthracite Coal Supply and its Conservation.*—8th Internatnl. Congr. of Appl. Chem'y, Proc., Vol. 24, 1912; pp. 79-113.

Johnson, R. H.—*Shortage of Refinable Crudes;* [Summary of underground reserves of fuel and refinable crude oils in U. S.].—Natnl. Petroleum News, 1912; pp. 42-44; 50c.

Kalmus, H. T.—*Conservation and Research;* [Waste and conservation in fuels, nitrates, iron and steel, smelter slags and fumes, etc.].—Science Conspectus, April, 1912; p. 152; 3200 w; 65c.

Messinger, F.—*Das Steinkohlengas im Kampf gegen die Verschwendung des Nationalvermögens;* [The gas producer and coal gas in the fight against dissipation of national resources].—Oldenburg, Germany; 1912; 138 pp.; 120 figs.; $1.50; (book).

Nicholson, N. A.—*Conservation of Nova Scotian Coal Fields.*—Canadian Mng. Jnl., Oct.1,1912; p. 671; 2500 w; 25c.

Parker, E. W.—*Coal Resources of the United States.*—Canadian Mng. Inst., Trans.; Vol. 15, Pt. 1; 1912; pp. 32-37*; $1.15.

Raymond, R. W.—*Our National Resources and Our Federal Government.*—Amer. Inst. of Mng. Engrs., Bull. 70; Oct.,1912; pp. 1111-1122; $1.15.

———. *Die Preispolitik der staatlichen Bergbauverwaltung;* [The price policy of the Prussian state mines].—Deu. Bergwerks Ztg., Oct.25, p. 1; 1500 w; 35c.

———. *Législation Etrangère; Colonies Portugaises;* [Mining laws and regulations of the Portuguese colonies; chiefly regulations of Sept.20,1906].—Annales d. Mines, May,1912; pp. 457-468; 70c.

———. *Mineral-Land Withdrawals; Reply to Director Smith;* [Discusses illegality, and handicap on mining and

commercial development in U. S.].—Mining & Engg. World, Aug.31,1912; p. 385; 3500 w; 10c.

———. *Wie sich de Sozialismus den Bergwerkbetrieb der Zukunft vorstellt;* [How the mining industry would be conducted under a socialistic regime].—Deu. Bergwerks Ztg., Oct.30, p. 1; Nov.1, p. 1; 3000 w; 45c.

GOVERNMENT OWNERSHIP

Bain, H. F.—*Alaska Coal Land Problems;* [Includes proposal of conducting a government mine].—Amer. Inst. Mng. Engrs., Bull. 68, Aug.,1912; pp. 811-843; $1.15.

Abstract on Government Mining in Black Diamond, Aug.31, p. 15; 2000 w; 30c.

Beumer, W.—*Soziale Lager der Bergarbeiter, und Kohle als nationales Erzeugnis;* [The social position of the coal miner, and nationalization of the coal mining industry].—Die Woche, 1912, No. 12; pp. 469-72; 75c.

Blom, D. van.—*Staatsmijnen en particulieren;* [State-owned vs. private-owned mines, with special reference to Holland coal mines].—Economist, No. 6, 1912; pp. 441-450.

Broome, G. H.—*Victoria's State Coal Mine;* [Report to Minister of Mines].—Australian Mng. Standd., Oct.17, p. 371; 1000 w; 35c.

Gutdeutsch.—*Ueber Wesen und Bedeutung von Reservefonds mit besonderer Berücksichtigung der Bedürfnisse der Staatsbergbau;* [The reserve fund and its status in state-owned mines].—Zts. f. Berg-, H.-, & Salinenw., Vol. 60, No. 2; 1912; pp. 147-185; 90c.

Muffelmann, L.—*Zum Petroleum Staatsmonopol in Deutschland;* [The projected state petroleum and oil monopoly in Germany].—Allgm. Oestr. Chemiker Ztg., June 15,1912; p. 89; 1400 w; 35c.

Noth, J.—*Die ärarischen Petroleumfelder Galiziens;* [The governmental oilfields of Galicia; read to Allgm. Bergmannstag, Vienna, 1912; abstract].—Montanist. Rundschau, Sept.15,1912; p. 964; 800 w; 50c.

Pohlman, A.—*Kohlenfiskus und Kohlensyndikat;* [The problem of the government, the state coal mines, and the Rhenish coal syndicate].—Bodenreform, 1912; No. 4; pp. 94-101.

Pohlmann, A.—*Der Staat und die Syndikate; ein Beitrag zur Bergwerksfrage;* [The Government vs. Syndicates in the mining industries].—Leipzig, 1912; 64 pp; 75c (book).

Rowe, H. E. — *Presidential Address, Chamber of Mines of Victoria.*—Vict. Ch. of Mines, Jnl.; June,1912; p. 200; 7000 w; 45c.

Wiessner, —. *Der Staatsbergbau und die Prämienlohnsysteme;* [Government mining and the premium wage system].—Kattowitz, 1912; 50c (pamphlet).

———. *Bergbauverstaatlichung und Bergarbeiter;* [Wages and state mines; higher wages in Dortmund private-owned mines than in Saar state mines].—Deu. Bergwerks Ztg., Nov.2, p. 1; 500 w; 35c.

———. *Der preussische Bergfiskus und das Rheinisch-Westfälische Kohlensyndikat;* [Relations between the Prussian state mines and the Rhine-Westphalian coal syndicate].—Handel & Industrie, Feb.10,1912; pp. 147-148; 75c.

———. *De Kolenmijnbouw in Nederland in het bijzonder het Staatsmijnbedrijf;* [Coal mining in the Netherlands, with special reference to state-owned mines].—Tijdschr. van Nijverheid, No. 5, 1912; pp. 225-238.

———. *Der Steinkohlenbergbau im Saargebiet;* [The coal mining industry of the Saar region; fiscal and private production].—Deu. Bergwerks Ztg., Sept.21,1912; p. 1; 1600 w; 35c.

———. *Die Wirtschaftlichkeit des Staatsbetriebes im preussischen Bergbau;* [Industrial economics of state operation of coal mines in Prussia].—Zts. f. Sozialwissenschaft, Nos. 7, 8, 1912; pp. 546-555; 75c.

———. *Gemeindeziegeleien in Oesterreich-Ungarn;* [Municipal and county brick works in Austria].—Ton Industrie Ztg., Sept.24,1912; p. 1536; 1600 w; 35c.

———. *Mines Nationalization Bill;* [Draft bill of Miners' Federation of Gt. Britain].—Iron & Coal Trades Rev., Oct.11, p. 600; 1000 w; 35c.

———. *Nationalization of Mines;* [Editorial discussion].—Iron & Coal Trades Rev., June21,1912; p. 1005; 1200 w; 35c.

———. *Nationalization of Minerals;* [Opposes Lloyd George's suggestions for nationalization in Gt. Britain].—Mng. Jnl., July6,1912; p. 671; 1500 w; 35c.

———. *Per l'industria siderurgica nazionale;* [The problem of nationalization of the iron and steel industries of Italy].—Rassegna Mineraria, Oct.1, p. 173; 5000 w; 35c.

———, *State Coal Mining in Holland;* [Discusses acquisition of Maasfield group].—Mng. Jnl., June15,1912; p. 614; 200 w; 35c.

———. *State Mines and Reserve Funds;* [in Prussia].—Mng. Jnl., Sept.21,1912; p. 939; 800 w; 35c.

———. *The Brakpan Government Lease.*—S. Afr. Mng. Jnl., Oct.19, p. 205; 1400 w*; 35c.

———. *Warum muss der Ruhrbergbau verstaatlicht werden;* [Problem of nationalization of the Ruhr coal fields, Prussia].—Techn. Grubenbeamte, July8,1912; p. 133; July22, p. —; 3000 w; 50c.

FINANCIAL; BUSINESS ORGANIZATION

Bettington, Col. R. A.—*The Story of the Johannesburg Stock Exchange.*—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 71; 10,000 w*; $1.

Charlton, W. H.—*Insurance on Mine Property.*—E. & M J., Aug.31,1912; p. 391; 1200 w; 25c.

Chance, H. M.—*Appraisement of Michigan Coal Lands.*—Coal Age, July6,1912; p. 13; July 13, p. 51; 5000 w; 30c.

Colburn, E. A., Jr.—*Leasing at Cripple Creek.*—E. & M. J., July6,1912; p. 5; 1200 w; 25c.

Craig, E. H. Cunningham.—*The Prospectus of an Oil Company; As It Is and As It Might Be.*—Mng. Jnl., Aug.17,1912; p. 813; 1200 w; 35c.

Creen, J.—*The Fake Promoter in Coal Mining.*—Coal Age, Aug.24,1912; p. 255; 1300 w; 20c.

Finlay, J. R.—*Mine Valuation;* [Read to N. Y. section, Mng. & Met'g'l Soc. of Amer., May16.1912; abstract].—E. & M. J., June 22,1912; p. 1238; 1600 w; 25c.

Goodchild, W. H.—*Valuation of Base-Metal Mines.*—Mng. Mag., July,1912; p. 50; 2100 w; 45c.

Gutdeutsch.—*Ueber Wesen und Bedeutung von Reservefonds mit besonderer Berücksichtigung der Bedürfnisse der Staatsbergbau;* [The reserve fund and its status in state-owned mines].—Zts. f. Berg-, H.-, & Salinenw., Vol. 60, No. 2; 1912; pp. 147-185; 90c.

Hautpick, E. de.—*Organization of Capital in Russian Petroleum Industry.*—Mng. Jnl., Oct.12, p. 992; 2100 w; 35c.

Hautpick, E. de.—*British Capital in Russia.*—Mng. Jnl., June22,1912; p. 6; 9; 2500 w; 35c.

Hillman, Wm.—*Company Promotion in London.*—E. & M. J., July6,1912; p 19; 4000 w; 25c.

Hoover, H. C.—*Mine Valuation and Mine Finance;* [Redemption of capital; debentures vs. shares].—Mng. Mag., Oct., p. 275; 2200 w; 45c.

Janin, C.—*What are Mining Profits?* [Question of depreciation and corporation tax].—M. & S. P., Nov.2, p. 570; 1200 w; 20c.

Key, A. Cooper.—*Two Decades of Mining on the Rand;* [Review of mining and milling costs, extraction, profits, etc., 1890-1911].—E. & M. J., Aug.24,1912; p. 340; 1200 w*; 25c.

Lamb, R. B.—*Mine Valuation and Experimental Metallurgical Demonstration;* [from Canadian Mng. Jnl.].—Mex. Mng. Jnl., July,1912; p. 18; 1000 w; 35c.

Lewin, C. M.—*Abschreibungsfrage in Hütten- und Walzwerken;* [The question of writing off funds for repairs and renovations in smelters and rolling mills].—Centralbl. d. Hütten & Walzwerke, Aug.15, 1912; p. 430; 3000 w; 35c.

Martin, A. H.—*Importance of Graphic Maps in Promotion.*—Mining & Engg. World, Oct.19, p. 708; 1200 w; 10c.

Mencke, C.—*Die Geschäftsmethoden der Standard Oil Co.* [The business methods of Standard Oil].—Berlin, 1912; 208 pp*; $1 (book).

Moll, E.—*Die Rentabilität der deutschen Bergbau-Aktiengesellschaft;* [Financial profitability of stock corporations engaged in the mining industry of Germany].—Bergwirtsch. Mittlngn., June,1912; pp. 94-108; 75c.

Munroe, H. S.—*Mine Sampling and Valuation;* [Read to Mng. & Met'g'l Soc. of Amer., N. Y. section, May16,1912; abstract].—E. & M. J., June29,1912; p. 1276; 1500 w; 25c. Also in M. & S. P., July6, p. 18; 1000 w; 20c.

Tait, G. W.—*Gold Mine Accounts and Costing.*—London, 1912; $2 (book).

Weber, Wm.—*Ein Wort zum Kuxenhandel;* [A word on stock exchanges; or, What effect has the share market on the development of the German mining industry?]—Stein- & Braunkohle, July15,1912; p. 165; 2000 w; 35c.

Weston, W.—*Buying and Selling Mines;* [Reviews modern conditions as a result of using expert engineering advice].—E. & M. J., July27,1912; p. 153; 1000 w; 25c.

Wilson, J. B.—*How Not to Write a Prospectus.*—Mng. & Engg. Rev., Oct.,1912; p. 26; 1400 w; 35c.

Wittich, L. L.—*Profits in Lead Smelting;* [Joplin District, Mo.].—M. & S. P., Oct.19, p. 503; 800 w*; 20c.

Mining World Co.—*A Half Year's Dividends from Mines and Works;* [Statistics of American mining and metallurgical dividends, 1st semester, 1912].—Mining & Engg. World, July6,1912; p. 1; p. 44-55; 5000 w; tables; 10c.

———. *Bericht über den rheinischwestfälischen Kuxenmarkt für 1911, und statistische Mitteilungen über die wichtigsten Kohlen- und Kaligewerkschaften;* [Review of the Rhine-Westphalian share market in 1911, and statistics of the leading coal and potash companies].—Düsseldorf, 1912; 16 pp; 80c (pamphlet).

———. *California Oil in June;* [Production and dividends].—E. & M. J., Aug. 24,1912; p. 345; p. 342; 500 w; tables; 25c.

———. *Colliery Profits and Prospects;* [British; editorial review].—Iron & Coal Trades Rev., Sept.27,1912; p. 468; 1600 w; 35c.

———. *Credit Facilities for the "Small Man" in Mining.*—S. Afr. Mng. Jnl., Aug. 17,1912; p. 915; 2500 w; 35c.

———. *Dividends Declared by Rand Gold Mines,* 1887-1911.—S. Afr. Mng. Jnl., June29,1912; p. 662; 1000 w; tables; 35c.

———. *Dividends for the Half Year;* [Review of Transvaal and S. African gold, coal, tin, diamonds and holding corporations disbursements].—S. Afr. Mng. Jnl., July6,1912; p. 695; 1500 w; tables; 35c.

———. *Ein Arbeiterbergwerk;* [Miners' co-operative mine; Monthieur colliery, near St. Etienne, France, and its failure].—Montan Ztg., July1,1912; p. 242; 1000 w; 35c.

———. *Gold Mine Dividends for Half Year Ended June30,1912;* [Transvaal].—S. Afr. Mng. Jnl., June29,1912; p. 646; 500 w; tables; 35c.

———. *Iron and Steel Companies' Profits;* [British, 1910, 1911].—Iron & Coal Trades Rev., Aug.30,1912; p. 319; 1500 w; 35c.

———. *Mining Royalties;* [Comparison of British and foreign practice].—Iron & Coal Trades Rev., Aug.30,1912; p. 320; 1500 w; 35c.

———. *Mining Royalties;* [Discussion of final report of Royal Commission on Mining Royalties, 1893, reprinted in 1912 as Cd. 6980; royalties, and separation of surface and mineral rights].—Coll'y Guardn., May24,1912; p. 1045; 3000 w; 30c.

———. *Notes on Mine Valuation.*—Ballarat School of Mines Mag., Vol. 15, No. 57; 1912; 5 pp; 75c.

———. *Phantom Profits;* [Laxity in keeping of cost and profit accounts].—Mng. Mag., July,1912; p. 20; 1200 w; 35c.

———. *Russian Platinum Industry.*—M. & M., Dec.,1912; p. 286; 1000 w; 35c.

———. *Six Months of Gold Winning;* [Rand returns, 1st half-year, 1912].—S. Afr. Mng. Jnl., Aug.24,1912; p. 953; 1000 w; tables; 35c.

———. *The Progress of Working Costs and Profits;* [Recent Rand tendencies].—S. Afr. Mng. Jnl., July20,1912; p. 772; 1000 w; 35c.

———. *The Progress of Working Costs and Profits;* [Rand gold fields, 1908-1911].—S. Afr. Mng. Jnl., July13,1912; p. 729; 1600 w; 35c.

———. *The Rand in the Past Half-Year;* [Profits and losses; dividends; costs].—Afr. World, July20,1912; p. 634; 1000 w; table; 35c.

———. *The Scandal of the Comstock.*—E. & M. J., Oct.19, p. 745; 2400 w*; 25c.

———. *Witwatersrand Mines;* [Statis-

tics of active stamps, tube mills, capital, profits, dividends, estimated life, approximate yield].—Mng. World (London), Aug. 3,1912; p. 141; 2000 w; tables; 35c.

———. *Transvaal Gold Mining Dividends;* [25 years' record].—S. Afr. Mng. Jnl., July27,1912; p. 811; 2000 w; tables; 35c.

———. *Transvaal Gold Mining Dividends;* [1887-1911].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 328; 1800 w; $1.

———. *Working Costs and Profits on the Witwatersrand.*—Mining & Engg. World, Oct.5,1912; p. 622; 1200 w; 10c.

SYNDICALISM

Dupreyrat, J. C.—*The Russian Iron and Steel Syndicates.*—Iron & Coal Trades Rev., Aug.16,1912; p. 237; 1000 w; 35c.

Flechtheim, Dr.—*Deutsches Kartellrecht;* [The German law on cartels; Vol. I, Organization of the cartel].—Mannheim and Leipzig; 1912; 218 pp; $2 (book).

Frisch, G.—*Kontingentierung der Ziegeleien bei Gründung von Verkaufsvereinigungen;* [The assigning of allotments in the formation of the German brick sales-syndicate].—Ton-Industrie Ztg., Oct.31, p. 1723; 1000 w; 35c.

Hillringhaus, A.—*Das Rheinisch-westfälische Roheisensyndikat und seine Auflösung;* [The German pig-iron syndicates, with special reference to the Rhine-Westphalia Pig-Iron Syndicate and its dissolution].—Schmoller's Jahrbuch, Vol. 35, 1911; p. 1239; p. 1741; $1.50.

Leeuer, G. de.—*Cenni sulla organisazione dell'industria siderurgica nel Belgio;* [The syndicate organization of the iron and steel industry of Belgium; notes from de Leeuer's book (in French) on The Industrial Syndicates of Belgium].—Met. Italiana, Sept.,1912; p. 577; 3000 w; 45c.

Leisse, W.—*Wandlungen in der Organisation der Eisenindustrie und des Eisenhandel;* [Tendencies in the iron and steel industries toward world syndicate; extract from Leisse's book of above title].—Deu. Bergwerks Ztg., June5,1912; p. 1; 1500 w; 35c.

Pohlmann, A.—*Der Staat und die Syndikate; ein Beitrag zur Bergwerksfrage;* [The Government vs. Syndicates in the mining industries].—Leipzig, 1912; 64 pp; 75c (book).

Pohlman, A.—*Kohlenfiskus und Kohlensyndikat;* [The problem of the government, the state coal mines, and the Rhenish coal syndicate].—Bodenreform, 1912; No. 4; pp. 94-101.

Polster, O.—*Festschrift zum 10 Jahr Bestehen des Centralverbandes der Kohlenhändler Deutschlands;* [Centennial volume of the Central Union of Coal Dealers of Germany describing organization and activities].—Hamburg, 1912; 46 pp.; $1 (book).

Rousiers, Paul de.—*Les Syndicats Industriels de Producteurs en France et à l'Etranger;* [Industrial syndicate organization among producers in France and abroad; trusts, cartels, *comptoirs,* and international *ententes*].—Paris, 1912 (new, enlarged edition); $1.25 (book).

Wiedenfeld, K.—*Das Rheinisch-Westfälische Kohlensyndikat;* [The Rhine Westphalian coal syndicate; its organization and methods].—Bonn, 1912; 172 pp.; atlas of 5 plates; $3; (book).

Amer. Acad. of Political & Social Science.—*Industrial Competition and Combination.*—Publications of the Academy, Vol. 42; July,1912; 384 pp; $6.50 (book).

———. *Die Kontingentierung bei Gründung von Ziegelei-Verkaufsvereinigungen;* [The problem of apportioning allotments in syndicates and how it was solved in the German Brick Sales Syndicate].—Ton Industrie Ztg., Oct.3, p. 1593; 1000 w; tables; 35c.

———. *Die Oesterreichische Kartellenquete über die Eisenindustrie;* [Investigation by the Austrian Ministry of Commerce on the syndicate organization of the iron and steel industry of Austria].—Deu. Bergwerks Ztg., June6,1912; p. 1; 1200 w; 35c.

———. *Die Oesterreichische Kartellenquete über die Zementindustrie;* [Investigation by the Austrian Ministry of Commerce on the syndicate organization in the cement industry of Austria].—Deu. Bergwerks Ztg., June1,1912; p. —; June7, p. 1; 2500 w; 50c.

———. *Der Stand der Erneuerungsfrage des Kohlensyndikates;* [Status of the question of renewal of the Rhine-Westphalian coal syndicate].—Internatnl. Volkswirt, No. 2, 1912; pp. 17-18; 75c.

———. *Der preussische Bergfiskus und das Rheinisch-Westfälische Kohlensyndikat;* [Relations between the Prussian state mines and the Rhine-Westphalian coal syndicate].—Handel & Industrie, Feb.10,1912; pp. 147-148; 75c.

———. *Proyecto de sindicacion de las empresas carboneras españolas;* [The projected syndication of the coal industry of Spain].—Rev. Minera, July16,1912; p. 337; 1500 w; 35c.

———. *Sixty Years' Development of the Large Mining Corporation.*—Mining & Engg. World, Oct.26, p. 749; 1000 w; 10c.

———. *The Cartel Movement in Germany.*—Coal & Coke Op., Aug.29,1912; p. 138; 1000 w; 25c.

———. *The Coal Vend Case;* [Court decree that sales agreement in self preservation against cut-throat competition is not in restraint of trade].—Austral. Coal & Iron Trades Rev., Oct.2d, p. 100; 3600 w; 35c.

———. *The German Potash Industry;* [The syndicate, the potash law, and results].—Amer. Fertilizer, July13,1912; p. 36; 1500 w; 25c.

———. *The Italian Steel Industry;* [Discusses the trust].—Iron & Coal Trades Rev., June14,1912; p. 968; 1000 w; 35c.

EDUCATIONAL; SCHOOLS AND SOCIETIES

Bernewitz, M. W. von.—*Training of Mine Employes.*—M. & S. P., Sept.14,1912; p. 336; 2400 w; 20c.

Brandt, O.—*The Education of Apprentices in the Foundry.*—Amer. Foundrym. Asso., Proc. f. Sept.,1912; pp. 147-151; 50c.

Bromley, H.—*The Training of Artisans and Skilled Operators in S. Africa;* [Read to Soc. of Civil Engrs.].—S. Afr. Mng. Jnl., July20,1912; p. 777; 2200 w; 35c.

Dague, J. H. and S. J. Phillips.—*Mine Accidents and Their Prevention;* [with 200 mine photographs by W. B. Bunnell; D. L. & W. R. R. Co. manual for instruction of miners, especially non-English-speaking].—Scranton, Pa.; 1912; 69 pp.*; 50c.

Higbee, F. G.—*The Training of Draughtsmen;* [Read to Amer. Soc. of Engr. Draughtsmen; abstract].—Mechl. World, May31,1912; p. 257; 1200 w; 35c.

Krause, H.—*Die Ausbildung der Former und Metallgiesser an der Kgl. Fachschule für Metallindustrie zu Iserlohn;* [Instruction in molding and foundry casting at the Iserlohn royal trade school for the metal industries].—Giesserei Ztg., Oct.15, p. 623; 2500 w*; 35c.

Lippart, G.—*Die Ausbildung des Lehrlings in der Werkstätte;* [The training of apprentices in shops and mills].—Technik & Wirtschaft, Aug.,1912; pp. 501-518; 75c.

Montanus, H. H.—*Antiker Bergbau in Griechenland;* [Ancient mining in Greece].—Montanist. Rundschau, Nov.16,1912; p. 1202; 3300 w (first part); 35c.

Ohmann, O.—*Die Verhütung von Unfällen im chemischen und physikalischen Unterricht;* [Accident prevention in teaching chemistry and physics].—Berlin, 1912; 80 pp; $1.50 (book).

Purdue, A. H.—*The Education of Mine Foremen;* [Read to Soc. of Tennessee Mine Foremen, Oct.,1912].—Coal Trade Bull., Nov.15, p. 31; 3000 w; 25c.

Pooler, F. J.—*The Surface Workers on the Rand, and Their Technical Education.*—Chemi. Met. & Mng. Soc. of S. Afr., Jnl.; June,1912; p. 505; 7000 w; 90c.
Abstract in S. Afr. Engg., Aug.31,1912; p. 32; 3600 w; 35c.

Saunders, Wm. L.—*Culture in the Education of Engineers;* [Commencement address, Colo. School of Mines, May24,1912].—Colo. School of Mines Mag., June,1912; p. 197; 2500 w; 65c.

Schumacher, R. W.—*Training of S. African Miners;* [Village Deep, Crown Mines, and Wolhüter schools].—S. Afr. Mng. Jnl., July20,1912; p. 773; 1000 w; 35c.

Sexton, F. H.—*The Murray Laboratory of Mining Engineering, Halifax, N. S.;* [Technical College].—Canadian Mng. Jnl., June15,1912; p. 400; 2700 w; 35c.

Sibley, R.—*Gas Engineering in American Universities.*—Jnl. of El'y, Power & Gas, Sept.21,1912; p. 249; 7000 w*; 35c.

Smith, J. T.—*Studying for the Oil Degree;* [New course at Birmingham; methods and equipment].—Petroleum World, Oct.,1912; p. 419; 1200 w*; 35c.

Stanley, G. H.—*The South African School of Mines and Technology.*—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 351; 6500 w*; $1.

Stoek, H. H.—*A New Mining Laboratory at the University of Illinois.*—Mng. Sci., July11,1912; p. 22; 600 w; 20c.

Tolman, C. F.—*The Teaching of Economic Geology.*—Econ. Geol'y, June,1912; pp. 393-399; 65c.

Treutlein.—*Die neueren Bestrebungen zur Verbesserung des mathematischen Unterrichts an den höhern Schulen Deutschlands;* [Newer demands for improvement in teaching mathematics in the higher schools of Germany].—Ver. Deu. Ingr., Zts; July 27,1912; pp. 1199-1206*; 50c.

Young, E. L.—*A Novel Way of Teaching Rock Drilling;* [at Univ. of Mo. School of Mines].—Compr. Air Mag., Sept.,1912; p. 6545; 1000 w*; 25c; also in E. & M. J., June 22,1912; 25c.

Zern, E. N.—*The Projection and Development of a Mining School;* [Proposed for West Virginia; read to W. Va. Coal Mng. Inst., June,1912].—Coal & Coke Op., June13,1912; p. 369; 3500 w; 25c.

———. *Coal Mining.*—Sci. & Art of Mining, Nov.28, Nov.23,1912; p. 174; 1200 w*; 25c.

———. *Company Schools for Mine Employes.*—Coal Age, Sept.7,1912; p. 314; 750 w; 20c.

———. *Constitution and By-Laws of the American Institute of Mining Engineers.*—M. & S. P., Nov.30,1912; p. 693; 7000 w; 20c.,

———. *Grubenrettungswesen an der kgl. Bergschule;* [Mine rescue equipment and instruction at the royal mining school at Saarbrücken, Prussia].—Saarbr. Bergmanns Kalender, 1912; pp. 42-91; $2.

———. *Mining Instruction in Elementary Schools in South Africa.*—S. A. Mg. Jnl., Nov.9,1912; p. 307; 1200 w; 35c.

———. *Mining Instruction in Elementary Schools.*—Iron & Coal Trades Rev., Oct. 4, p. 564; 1000 w; 45c.

———. *Petroleum Mining School;* [Proposed new courses at Univ. of Birmingham].—Mng. Jnl., July20,1912; p. 718; p. 726; 2000 w; 35c. Also discussed in U. S. Consul. Rep., Aug.1, p. 569; 400 w; 20c.

———. *Spokane Meeting American Mining Congress.*—Mg. & Eng. World, Dec.7, 1912; p. 1045; 3000 w*; 10c.

———. *The New College Graduate and His Employment.*—Mining & Engg. World, Sept.21,1912; p. 519; 1000 w; 10c.

———. *The State Miners' Training School at Walhuter.*—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 157; 600 w; $1.

HISTORICAL

Browne, David H.—*History of the Nickel Industry in the United States and Canada.* (Paper read before Undergraduates Society of Applied Science of McGill Univ.; abstract).—Can. Mg. Jnl., Dec.1,1912; p. 817; 3000 w; 30c.

Fleck, A.—*Beiträge zur Geschichte des Kupfers;* [History of copper, with special reference to production and technical preparation].—Jena, 1912; 60 pp; $1 (book).

Griffith, Wm.—*Beginning of Anthracite Coal Trade.*—Coal Age, July13,1912; p. 40; 1600 w*; 20c.

Günthersberger, J.—*Aus der frühesten Geschichte des Bergbaues in Böhmen;* [The earliest history of mining in Bohemia up to 1854; with directory of ancient mines].—Zentral Verbd. Bergbau Betriebsl. Oestr., Zts; Sept.15,1912; p. 533-573*; 50c.

Hommel, W.—*Ueber den Berghauptmann Löhneysen;* [Notes on Löhneysen's mining manual of 1617].—Chemiker Ztg., May 18,1912; p. 562; 1000 w; 35c.

Hommel, W.—*Origin of Zinc Smelting;* [In China and India].—E. & M. J., June15, 1912; p. 1185; 4000 w; 25c.

Hommel, W.—*Zur Geschichte des Zinks;* [History of zinc; origin of name and first conception of zinc as a metal].—Chemiker Ztg., Aug.8,1912; p. 905; Aug.13, p. 918; 6000 w; 50c.

Hoover, H. C. and L. H.—*Notes on Historical Development of Mining Law.*—E. & M. J., Nov.2, p. 823; 4500 w; 25c.

Hoover, H. C., and L. H.—*Theories of Ore Deposition Prior to the 17th Century.*—

M. & S. P., Oct.5,1912; p. 426; 6500 w*; 20c.

Hoover, H. C., and L. H.—*"De Re Metallica of Georgius Agricola";* [Translation of the 1st Latin edition of 1556].—London, 1912; $6 (book).

James, Alfr.—*The Forcing of a Process;* [Early history of cyanide process].—S. Afr. Mng. Jnl., Anniversary No., Sept.,1912; p. 37; 5000 w; $1.

Kershaw, John B. C.—*Electric Furnace Methods of Steel Production.*—Ir. Tr. Rev., Nov.21and28,1912; 9000 w*; 50c.

Keyes, C. R.—*First Recorded Use of Mineral Coal in America;* [In Minnesota and Iowa].—E. & M. J., July6,1912; p. 27; 750 w; 25c.

MacLean, T. A.—*Notes on the Porcupine Gold Region, Ontario.*—Jnl. Mg. Soc. N. S., Vol. XVII, 1912; p. 82; 11 pp*; 50c.

Martell, P.—*Zur Geschichte des Hüttenwesens in Steiermark;* [History of siderurgy in Styria].—Zentral Verbd. Bergbau Betriebsl. Oestr., Zts. July15,1912; p. 417-423; 6000 w; 45c.

Martell.—*History of Mining Industry in Russia* [in German].—See under Gold.

Martell, P.—*Zur Geschichte des Salinenwesens in Westfalen;* [History of the salt industry of Westphalia].—Kali, June1,1912; p. 270; June15, p. —; 8000 w*; 65c.

Martin, A. H.—*Evolution of Stamp Milling at Home and Abroad;* [History in California and Randfontein Central, Rand].—Mines & Methods, Sept.,1912; p. 561; 2500 w; 25c.

Martin, A. H.—*The Pioneer Gold Stamp Mills of California;* [History of early-day stamps].—Mining & Engg. World, Aug.24, 1912; p. 332; 1500 w; 10c.

Milner, W. C.—*History of Albertite in New Brunswick.*—Jnl. Mg. Soc., N. S., Vol. XVII, 1912; p. 62; p. 8; 50c.

Penrose, R. A. F.—*History of Gold Mining in the U. S.*—Popular Sci. Monthly, Feb.,1912; pp. ——; 65c.

Rice, Claude T.—*Square-Set Timbering; Importance and Evolution* (first article).—Mg. & Eng. World, Dec.14,1912; p. 1079; 4500 w*; 10c.

Simmersbach, B.—*Geschichte der Entwickelung der bergbaulichen und industriellen Betriebe in der Mark Brandenburg;* [History of development of the mining industries in Mark Brandenburg up to 1800; peat, coal, gypsum, iron and steel, copper, brass, gold, silver].—Deu. Bergwerks Ztg., July21, p. 1; July24, p. 1; July25, p. 1; 6000 w; 50c.

Strahl, G.—*Aus der Geschichte des Eisens;* [Earliest historic and prehistoric applications of iron].—S. W. Deu Industrie Ztg., Sept.7,1912; p. 516; 600 w; 35c.

Weyhmann, A.—*Der Bergbau auf Kupferlasur zu Wallerfangen a. d. Saar unter den lothringischen Herzögen,* 1492-1669; [Copper mining industry at Wallerfangen on the Saar, Prussia, during the Lorraine duchies, 1492-1669].—Saarbrücken, 1912 (Wirtschaftl. Studien, Heft 1); pp. —; (book).

———. *Friedrichs des Grossen Tätigkeit für Hüttenwesen und Bergbau;* [Frederic the Great and his part in developing metallurgy and mining].—Montan Ztg., July1, 1912; p. 243; 2000 w; 35c.

———. *The Moqattam Hills;* [Quarry industry which furnished the stones for the Pyramids].—Indian & Eastn. Engr., Aug., 1912; p. 83; 1000 w*; 35c.

———. *Ups and Downs of Lake Superior Ore Prices.*—Ir. Tr. Rev., Nov.28,1912; p. 1026; 2500 w*; 25c.

FILING AND INDEXING

Allen, C. A.—*An Extension of the Dewey System as Applied to Mining.*—Colo. School of Mines Quar'ly, Oct.,1912; 108 pp.; 65c.

Beebee, L.—*Method for Filing Literature.* —Power, July16,1912; p. 79; 750 w*; 15c.

Botsford, H. L.—*An Index System for Maps.*—E. & M. J., Oct.5,1912; p. 638; 300 w*; 25c.

Comstock, G. S.—*A Filing System for Catalogs;* [from Engrs. Soc. of Penn. Jnl.]. —Engg. News, Aug.22,1912; p. 347; 500 w; 25c.

Handy, D. N.—*The Library as a Business Asset;* [Read to Special Libraries Asso.; abstract].—Engg. News, Oct.17, p. 735; 800 w; 25c.

Mahon, J. M.—*Loose-Leaf Engineering Catalogues;* [and their filing].—Iron Age, Aug.15,1912; p. 382; 2100 w; 30c.

Trautwine, J. C., 3d.—*Filing Methods and Routing in an Engineering Office.*—Engg. News, Aug.22,1912; p. 350; 1000 w; 25c.

Young, L. E.—*Bibliography of Mining in* 1911.—Mineral Industry, Vol. 20, 1912; pp. 762-781.

———. *The Company Library; Its Beginnings at Johnstown, Pa.*—Mining & Engg. World, Oct19, p. 702; 600 w; 10c.

———. *The First Mining World Index of Current Literature.*—Mining & Engg. World, Sept.14,1912; p. 473; 1000 w; 10c.

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